



How did the Eurosystem's collateral strategy adapt to the Covid-19 crisis?

A central bank's collateral policy consists in defining the eligibility criteria of the assets that banks pledge as collateral for their credit operations. Holding sufficient eligible collateral is therefore essential for the banking sector to ensure its refinancing. In response to the Covid-19 crisis, the Eurosystem temporarily eased its collateral rules to facilitate access to its targeted refinancing operations. These measures will be phased out from summer 2022. Overall, these measures have not led to a significant deterioration in the quality of assets pledged at the central bank. By matching data on the banking sector's securities and loan portfolios with Eurosystem collateral data, it is possible to estimate that the banking sector has, overall, room for manoeuvre in terms of available collateral, and to study the factors underlying the decision by banks to pledge collateral with the central bank.

Beatrice Brueckner, Pauline Lez
Monetary Policy Implementation Directorate

Benoît Nguyen
Monetary and Financial Analysis Directorate

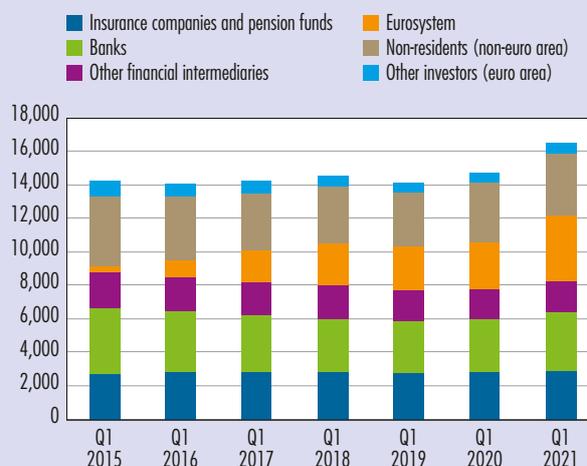
JEL Codes
E52, E58,
G21, O16,
C58

EUR **16,000** billion
outstanding amount of securities eligible as collateral with the Eurosystem in the first quarter of 2021, at market value

EUR **3,400** billion
outstanding amount of eligible securities held by euro area commercial banks in the first quarter of 2021, after haircut

EUR **2,100** billion
amount borrowed by banks from the Eurosystem in the first quarter of 2021

Institutional investor sector holdings of Eurosystem eligible securities
(EUR billions)



Sources: European Central Bank (ECB), authors.
Note: Amounts at market values. Eurosystem holdings are derived from ECB public data.



1 Banks hold around 20% of Eurosystem eligible securities

What is the universe of eligible collateral?

In order to participate in the Eurosystem's refinancing operations, euro area banks must pledge collateral in the form of securities – in particular sovereign bonds,¹ bank and corporate bonds and covered bonds – or credit claims, i.e. loans to households and companies. The Eurosystem defines eligibility criteria, regarding issuers, asset classes and credit risk (Bindseil, Corsi, Sahel and Visser, 2017).

The universe of eligible marketable assets for the Eurosystem's refinancing operations amounted to around EUR 16,000 billion in the first quarter of 2021, compared with EUR 15,000 billion in the fourth quarter of 2019. This increase of around EUR 1,000 billion mainly reflects the rise in debt issuance since the start of the Covid-19 pandemic. The eligible universe is made up of sovereign bonds (65%), bank and corporate bonds (21%) and covered bonds (15%). This amount depends on the outstanding amount, the valuation of the securities, but also on the eligibility rules: some securities may become ineligible following downgrades of their credit quality.² The eligibility rules themselves vary according to the Eurosystem's decisions: for example, they were eased during the pandemic (see Box 1).

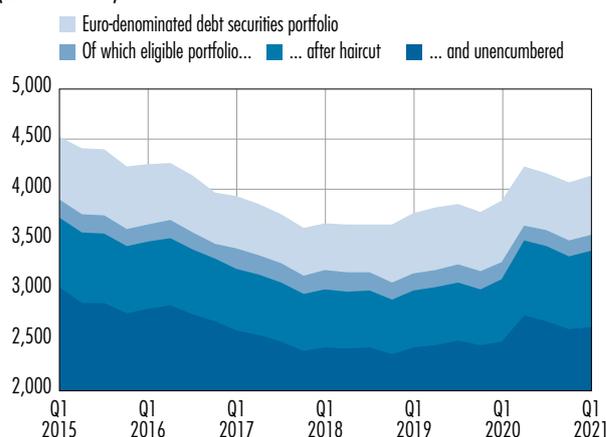
Euro area banks hold only a small share of this eligible universe, which raises the question of the availability of collateral in sufficient quantity on bank balance sheets, particularly in the context of a crisis when it comes to dealing with liquidity shocks and accessing central bank refinancing. Thus, during the Covid-19 crisis, the demand for refinancing increased sharply, with the outstanding amount of targeted longer-term refinancing operations (TLTROs) jumping from EUR 627 billion in the fourth quarter of 2019 to around EUR 2,100 billion in the first quarter of 2021.

The holding of eligible securities by euro area banks

Did this sharp increase in refinancing go hand in hand with pressure on collateral availability? As regards eligible securities, by matching securities holdings statistics by sector (SHSS) with the Eurosystem's eligible assets database (EADB), it is possible to assess the portfolio of eligible securities held by banks. In the first quarter of 2021, the euro area banking sector held around EUR 3,500 billion worth of eligible securities in nominal terms, which accounted for the bulk of their debt securities portfolio (see Chart 1). The evolution of eligible securities holdings partly reflects the Eurosystem's purchase programmes between 2015 and 2020, with banks being one of the largest net sellers (Koijen, Koulischer, Nguyen and Yogo, 2021). In the post-Covid period, the banking sector's absorption of some of the large debt issuances, in particular public debt, led to a rebound in their holdings of eligible securities.

C1 Securities held as collateral by euro area banks

(EUR billions)



Source: ECB (SHS and CBD2 databases).

¹ Securities issued by the central government.

² The Eurosystem credit assessment framework (ECAF) determines the minimum credit quality accepted for the collateral framework. To be eligible, securities must be rated investment grade (BBB-) by at least one of the four accepted external rating agencies (S&P, Fitch Ratings, Moody's and DBRS Morningstar). See European Central Bank (ECB), "Eurosystem credit assessment framework (ECAF)" (<https://www.ecb.europa.eu/>).



BOX 1

The Eurosystem's collateral easing measures during the pandemic

The Eurosystem's collateral framework is governed by two mechanisms: the permanent monetary policy framework and the temporary framework, which gives national central banks room for manoeuvre to define additional measures. The general rule is that securities must have a minimum credit quality determined by credit quality steps (CQS), with the threshold set at "CQS3", which corresponds to a BBB– or equivalent rating. Asset-backed securities (ABS) must be rated CQS2 by at least two agencies, which corresponds to an A– or equivalent rating.

On 7 April 2020, the Eurosystem announced a series of measures to ease its collateral framework in response to the Covid-19 pandemic,¹ as did other central banks (Buessing Loercks, King, Mak and Veyrune, 2020).

- A temporary reduction in haircuts of 20% on all eligible collateral (securities and credit claims), combined with an additional permanent reduction in haircuts on credit claims of around 20%. These decisions freed up approximately EUR 76 billion of collateral on the day of implementation.
- The acceptance of Greek government bonds despite their downgraded rating – an outstanding amount of about EUR 68.5 billion – of which about EUR 15 billion are held directly by euro area banks.
- The temporary lifting of the minimum amount for mobilising credit claims, which enabled French counterparties to pledge EUR 4.4 billion of additional collateral.
- The frequency of reporting of additional credit claims (ACC) was lowered from monthly to quarterly, and the acceptance criteria for banks' internal assessment systems were eased.
- The increase in the concentration limit on uncovered bank securities from 2.5% to 10%, which generated up to EUR 160 billion of potential additional collateral.
- The widening of the ACC framework, by authorising the acceptance of corporate loans up to CQS5, as well as loans with a government guarantee without a minimum CQS.
- The lowering of the minimum rating authorised to CQS5 (from the current CQS3) for already eligible securities. This measure had a limited impact, as it aimed at maintaining the amount of eligible securities in case of massive downgrades, which did not occur.

On 24 March 2022, the European Central Bank (ECB) announced the gradual withdrawal of these easing measures, which will start on 8 July 2022 and is expected to end in March 2024.

¹ Press release of 7 April 2020 (<https://www.ecb.europa.eu/press/>).
Press release of 24 March 2022 (<https://www.ecb.europa.eu/press/>).
ECB (2020), "Improving funding conditions for the real economy during the COVID-19 crisis: the ECB's collateral easing measures", April (<https://www.ecb.europa.eu/press/blog/>).



However, banks cannot borrow an amount equivalent to that of their eligible securities held for two reasons.³

- The first is that **a haircut is applied by the Eurosystem** to the market value of these securities in order to protect the central bank from the possible default of one of its monetary policy counterparties. The haircuts depend on the credit quality of a security, its issuer, its maturity and its liquidity, as defined by the Eurosystem. Since April 2020, haircuts can range from 0.4% to 53.2%.⁴ In the first quarter of 2021, the average haircut weighted by outstanding amounts stood at 4.38% for the securities pledged with the Eurosystem (compared with 5.8% for all EADB eligible securities). On the amount of securities pledged with the Eurosystem, the application of this haircut reduces the value of collateral by around EUR 130 billion.
- The second is that not all of the eligible securities held by banks are necessarily available on their balance sheets: **some of these securities may already be used in other operations**, for example lent via repo transactions, pledged to guarantee margin calls, or used in a pool of covered bonds. These securities are known as “encumbered” and this encumbrance of assets is not neutral on banks’ cost of financing and credit risk (Banal Estañol, Benito, Khametshin and Wei, 2021). According to European Banking Authority (EBA) data, about 25% of euro area banks’ balance sheets is encumbered, with large disparities across countries and in the sources of encumbrance (Berthonnaud et al., 2021).

The data on securities holdings make it possible to determine the “additional” eligible marketable collateral (i.e. not pledged with the central bank) held by the banking sector. In the first quarter of 2021, euro area

banks held EUR 2,600 billion worth of unencumbered eligible securities,⁵ which could potentially be pledged to cover additional refinancing. As shown in Chart 1, this additional collateral represents a significant share of their eligible portfolio (EUR 3,550 billion)⁶ and of their total debt securities portfolio (EUR 4,150 billion). This estimate is calculated using the aggregate encumbrance ratio for the euro area banking sector, taking into account all sources of encumbrance – including central bank refinancing –⁷ and assuming that the eligible securities portfolio is encumbered in the same proportions as the rest of the balance sheet.

2 The Eurosystem’s response to the Covid-19 crisis has not led to a deterioration in the quality of the assets pledged with the Eurosystem

Collateral constraints have increased since 2020

The collateral utilisation rate is an indicator of the collateral constraints for banks participating in monetary policy operations. It is measured by the ratio of the outstanding refinancing amount to the amount of collateral pledged or available after haircuts. A counterparty has a collateral shortfall when its utilisation rate is above 100% (i.e. the value of its collateral after haircuts is less than its outstanding credit with the central bank). Chart 2 below shows the distribution of different collateral constraints by national banking sector in the euro area. Chart 2a shows the evolution of the utilisation rate of securities when comparing the outstanding refinancing amount to the securities already pledged with the Eurosystem. The median exceeded 100% in 2020, which means that **for half of the national banking sectors, the amount of pledged securities alone was not sufficient to cover refinancing operations.**

³ The Eurosystem also establishes a concentration limit rule for each counterparty on uncovered bank bonds which may be mobilised at up to 10% of the total collateral pool deposited.

⁴ Including securities in category CQS5. See “*Décision n° 2020-03 du 18 mai 2020 modifiant la décision n° 2020-02 du 20 avril 2020 relative à des mesures temporaires supplémentaires concernant les opérations de refinancement de la Banque de France et l’éligibilité des garanties*” (<https://publications.banque-france.fr/>).

⁵ At market value after haircut.

⁶ At market value before haircut.

⁷ Publicly available in the CBD2 database, which is accessible in the Eurosystem’s Statistical Data Warehouse.



Chart 2b shows the ratio of refinancing to eligible unencumbered securities held. This chart gives an indication of the room for manoeuvre that banks have with respect to securities held but not pledged, and shows that **in a quarter of the euro area countries, the available securities held alone were not sufficient to cover refinancing at the end of the first quarter of 2021.**

In order to ensure sufficient collateralisation, banks also pledge non-marketable collateral, i.e. credit claims, in addition to marketable securities. Chart 2c shows the current utilisation rate, this time calculated as refinancing divided by the total collateral pledged, all asset types combined. Overall, the **median utilisation rate reached 80% in the first quarter of 2021, compared with 60% a year earlier, reflecting the higher increase in outstanding refinancing than the rise in collateral pledged since March 2020.** Indeed, between the first quarter of 2020 and the first quarter of 2021, outstanding refinancing increased by 177% (from EUR 658 billion to EUR 1,822 billion), while total collateral rose by 62% (from EUR 1,636 billion to EUR 2,656 billion).

To counteract these trends and avoid a shortage of collateral, the Eurosystem introduced a series of easing measures from April 2020 (see Box 1). **Thanks to the set of Covid-19 measures, EUR 340.4 billion worth of additional collateral was made available for euro area banks, of which EUR 256.2 billion was pledged by counterparties in the first quarter of 2021.**

The decision to pledge a security depends on its liquidity and not on its credit quality

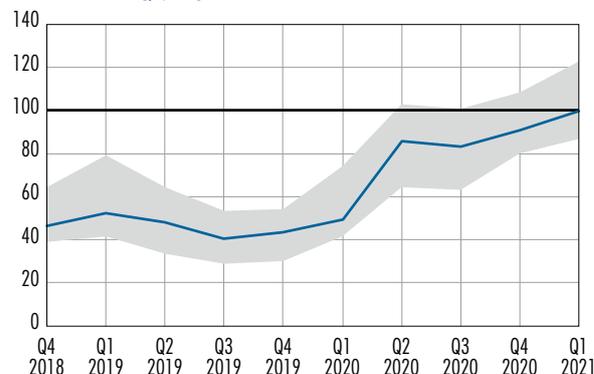
The academic literature has been divided on the question of the impact of the collateral framework on the transmission of monetary policy and on financial stability, particularly during the sovereign debt crisis of the 2010s.

- In this respect, some of the literature is critical and mentions the risk of a carry trade (Acharya and Steffen, 2015; Fecht, Nyborg, Rocholl and Woschitz, 2016), which would encourage banks to refinance high-risk

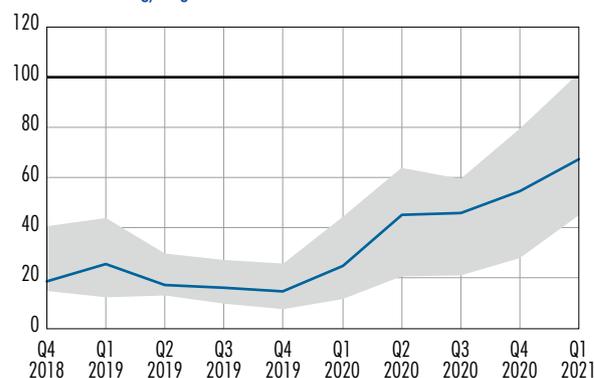
C2 Distribution of collateral constraints

(%)

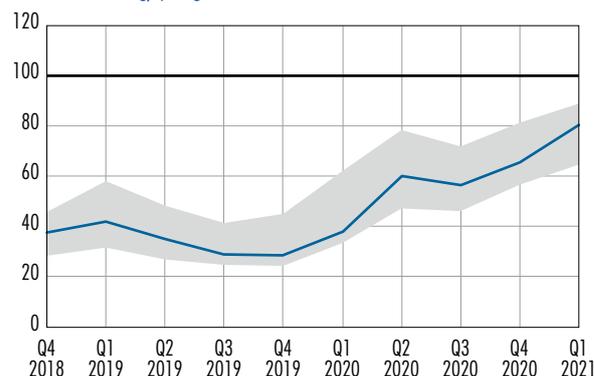
a) Ratio refinancing/pledged securities



b) Ratio refinancing/eligible unencumbered securities



c) Ratio refinancing/pledged securities and credit claims



Source: ECB (SHSS, SHSG and CBD2 databases).

Scope: Banking sectors in each euro area jurisdiction.

Notes: The band represents the 25th and 75th percentiles. The curve represents the median. The black line represents the ratio of banks' outstanding credit with the Eurosystem to the value of collateral after haircuts.

The encumbrance data are obtained from 130 representative banking groups reporting to the securities holdings statistics group (SHSG). The average ratio for each national banking sector is calculated on the basis of the nationality of the group head.



securities at the central bank. In this case, the lender of last resort could become a source of financial instability, as the weaker banks would borrow against riskier collateral to benefit from higher yields (Drechsler, Drechsel, Marques Ibanez and Schnabl, 2016).

- Conversely, the collateral framework may play a stabilising role in a crisis – notably by continuing to accept government debt (Orphanides, 2017; Lengwiler and Orphanides, 2021) – and contributes to the transmission of monetary policy (Mésonnier, O’Donnell and Toutain, 2021). The existence of collateral constraints is likely to limit the transmission of massive central bank refinancing measures such as TLTROs, which are intended to prevent a credit crunch during a crisis (Andrade, Cahn, Fraise and Mésonnier, 2019).

In order to contribute to this debate, the authors of this *Bulletin* compare the credit quality of eligible collateral

held with that of collateral pledged with the Eurosystem. Credit quality is measured by the credit rating used by the Eurosystem, which is the best rating among the agencies recognised by the Eurosystem for securities other than asset-backed securities (ABS), for which the second best rating is used.

Chart 3 shows that, overall, banks⁸ pledge securities of relatively similar quality to the securities they hold (see Chart 3a). There is no systematic bias over the period studied that would support the idea that banks pledge their worst collateral in terms of credit rating. The time series (see Chart 3b) shows that there is no deterioration after April 2020, which suggests that the easing of the collateral framework was not accompanied by a change in banks’ pledging behaviour: across national banking sectors, the collateral pledged with the Eurosystem is on average of relatively higher quality than the eligible collateral held.

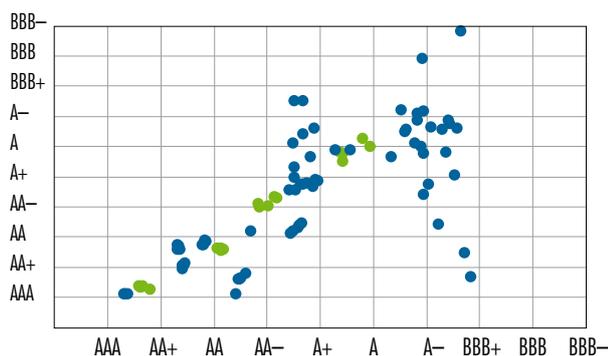
C3 Comparison of the credit quality of securities pledged and held

(by credit rating)

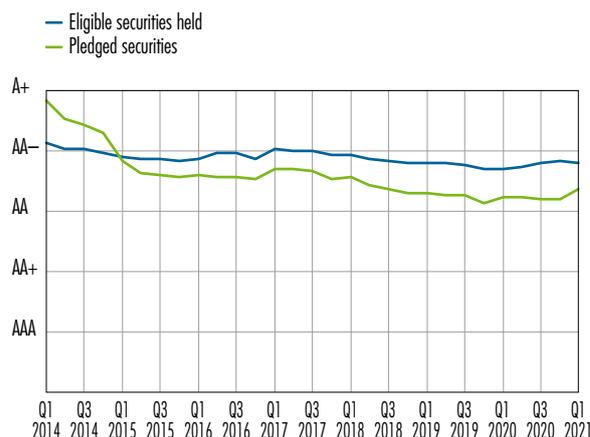
a) Comparison by national banking sector

(x-axis: eligible securities held; y-axis: pledged securities)

- Before March 2020
- After March 2020



b) Time series, weighted average for the euro area



Source: ECB and Eurosystem (SHSS and EADB databases).

Notes: In panel (a), each point corresponds to a domestic banking sector in a given quarter (Q3 2013-Q1 2021). The green dots correspond to observations from Q1 2020 onwards. The green dots remain on the diagonal indicating that the collateral pledged by banks is of the same credit quality as the collateral held.

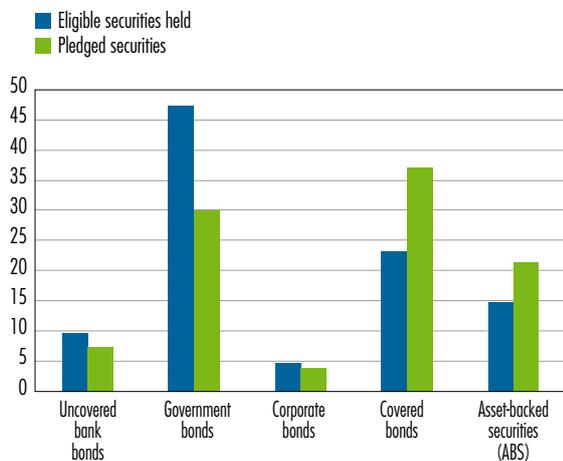
In panel (b), the time series corresponds to the average weighted by the outstanding amounts for all banking sectors in the euro area. A fall in the curve corresponds to an improvement in credit quality.

⁸ Defined here as the national banking sectors as reported in the European Central Bank’s securities holdings statistics by sectors (SHSS) database.



C4 Comparison of the composition of the portfolio of eligible securities held with the pledged collateral

(%, Q1 2021 data)



Source: ECB and Eurosystem (SHSS and EADB databases).

Note: ABS, asset-backed securities.

Chart 4 partly explains this observation: in their choice of collateral, banks tend to overweight ABS and covered bonds, which are of high quality but relatively illiquid, and may be ineligible as high quality liquid assets (HQLA), in order to keep the most valuable HQLA collateral to comply with the supervisory liquidity ratios imposed on banks (Grandia, Hänling, Russo and Åberg, 2019). It should be noted that these securities are in part retained securities, i.e. they are issued, guaranteed and held by a single bank, which in turn pledges them as collateral for Eurosystem credit operations. Conversely, banks choose to underweight government bonds in their pledged assets. In other words, they partly perform a liquidity transformation when they pledge collateral with the central bank, by pledging less liquid assets in exchange for perfectly liquid reserves, but do not specifically perform a credit risk transformation.

An econometric exercise described in Box 2 and in the Appendix confirms that banks tend to pledge their least liquid securities, i.e. those that are less valuable in terms of liquidity ratios (HQLA), but not at the expense of their credit quality. This suggests that banks implement a collateralisation strategy that does not only take into

account other uses of collateral outside the central bank, but also aims at avoiding excessive haircuts. The home bias remains significant in collateral mobilisation, which is partly explained by the pledging of retained securities.⁹

BOX 2

Determinants of the decision to pledge securities as collateral

Securities holdings statistics by sector (SHSS) and mobilisation data are used to model the determinants of the decision to pledge securities as collateral. The credit quality, the haircut level, the liquidity class, the country of the counterparty and the type of security (sovereign bonds, corporate bonds, asset-backed securities – ABS –, or covered bonds) serve as explanatory variables.¹

The results show that the probability of pledging a security depends negatively on the credit risk, the haircut applied by the Eurosystem and the issuance by a public sector entity. Thus, a sovereign bond is less likely to be pledged. The country bias plays a positive role: a security issued by an entity of the bank's country is more likely to be pledged. Comparing asset classes, we see that bonds – especially sovereign bonds – and covered bonds are less likely to be pledged than ABS.

Finally, the liquidity of the securities seems to play a major role in the choice of mobilisation. Using the liquidity classes as defined by the Eurosystem, the least liquid securities are more likely to be pledged, and in particular ABS. Using the prudential definition of liquidity, securities in the highest high quality liquid assets (HQLA) category (level 1 HQLA) are less likely to be pledged at the central bank, as they have a higher weighting in the liquidity ratios.²

¹ For econometric results, see Appendix.

² Liquidity coverage ratio (LCR), the 30-day liquidity ratio applied to banks since 2015.

⁹ By construction, the country of the issuer and the country of the bank are identical.



The increase in the pledging of credit claims has not led to a deterioration in their credit quality

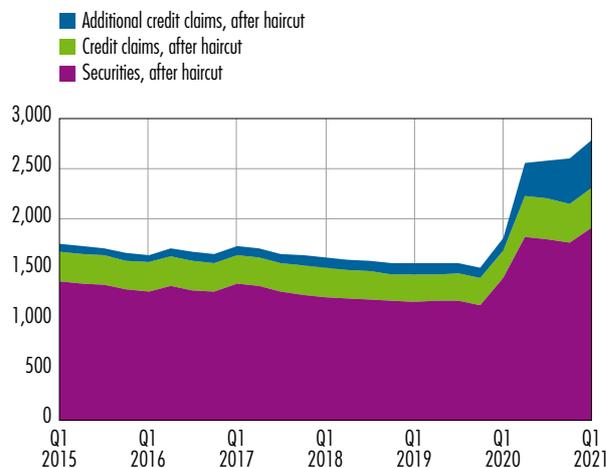
In addition to securities, credit claims may be pledged as collateral with the Eurosystem. In the permanent monetary policy framework, euro-denominated credit claims on non-financial corporations and public sector entities (excluding public financial corporations), multilateral development banks and international organisations are eligible as collateral.¹⁰ These claims must have a credit quality that corresponds to a maximum one-year probability of default of 0.4%. Since 2011, national central banks have also been able to temporarily accept additional credit claims (ACCs) of lower credit quality.¹¹ Within this temporary framework, loans to non-financial corporations with a one-year probability of default of up to 1.5%, as well as housing and consumer loans may be accepted as collateral. During the Covid-19 pandemic, most national central banks in the euro area set up or extended their ACC framework and the bulk of them accepted state-guaranteed loans, without any limit on the probability of default by the debtor.¹²

Chart 5 compares the amounts pledged in the form of credit claims and securities. The additional need for collateral was largely covered by securities (up 59% between December 2019 and June 2020) and by ACCs (up 196% over the same period), notably in the form of state-guaranteed loans.

Determining whether or not the credit quality of pledged credit claims is consistent with that of credit claims held on banks' balance sheets is less straightforward than for securities, due to the absence of comprehensive granular data. Nevertheless, thanks to the Eurosystem's AnaCredit database – which brings

C5 Composition of collateral pledged with the Eurosystem: securities and credit claims

(EUR billions)



Sources: ECB, Banque de France.

together the credit registers of the euro area countries – it is possible to extend the analysis to the claims of non-financial corporations.¹³

By taking the one-year probability of default by the debtor for each loan as a measure of credit risk, it is possible to calculate for each bank reporting claims to the Eurosystem in the AnaCredit database the weighted average of this probability of default for three categories of loans: (i) total; (ii) unencumbered loans; and (iii) loans reported to the central bank as encumbered. However, this measure is imperfect due to the guarantees attached to certain loans.

At the aggregate level, the analysis confirms that banks do not primarily pledge the highest risk eligible loans with the Eurosystem. Chart 6 below shows the median of these measures for the euro area as a whole.

10 See ECB (2020), "What are additional credit claim (ACC) frameworks?" (<https://www.ecb.europa.eu/>)

11 Prior to the Covid-19 pandemic, eight central banks had set up an ACC framework (in the following countries: Austria, Cyprus, France, Greece, Ireland, Italy, Portugal and Spain). These ACC frameworks are jurisdiction-specific and the corresponding eligibility criteria may vary across the euro area. (<https://www.banque-france.fr/politique-monetaire/>)

12 Depending on the jurisdiction, the state guarantee varies between 70% and 90% of the loan amount (Anderson, Papadia and Véron, 2020).

13 The AnaCredit database records for all banks in the euro area their portfolio of loans to legal entities; it does not cover loans to individuals.



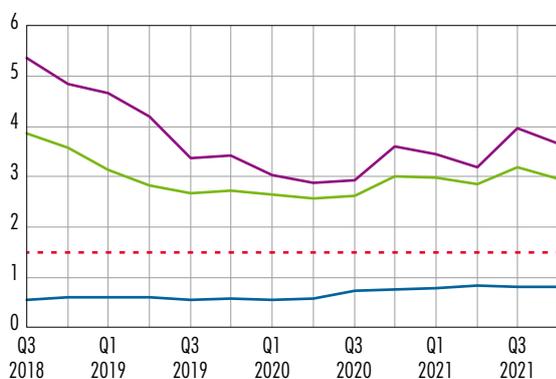
- The median of credit claims pledged with the Eurosystem, which was close to the 0.4% probability of default threshold prior to the pandemic, has increased but remains well below the maximum probability of default of 1.5%. In other words, the creation or extension of ACC frameworks has not resulted in the exclusive mobilisation of the highest risk loans.
- The increase in the probability of default of credit claims pledged since the Covid-19 crisis has moved in tandem with the rise in the probability of default of total loans and unencumbered loans.
- Finally, the increase in the probability of default also reflects the mobilisation of state-guaranteed loans during the pandemic, which are accepted without a default probability limit.

In conclusion, the analysis of banks' securities portfolio data is valuable for the operational conduct of the Eurosystem's monetary policy. The availability of securities on the balance sheets of monetary policy counterparties has declined somewhat in recent years, in particular since the introduction of the Eurosystem's purchase programmes. However, in the first quarter of 2021, the euro area banking sector held EUR 3,400 billion worth of eligible securities, after haircuts, of which around EUR 2,600 billion are estimated to be unencumbered (or available), compared with roughly EUR 1,900 billion pledged with the central bank. This additional collateral is very heterogeneously distributed across euro area countries and banks, with some relying mainly on non-marketable collateral (credit claims) to cover their refinancing needs with the central bank.

C6 Comparison of the probability of default of banks' credit portfolio and credit claims pledged with the Eurosystem

(%, quarterly data)

— Pledged credit claims
— Total credit claims
— Unpledged credit claims



Source: Eurosystem, AnaCredit database.

Scope: Sample of loans excluding loans to individuals, credit lines and credit card loans for euro area banks reporting that they pledge credit claims with the central bank.

Note: The probability of default is obtained by calculating the weighted average of debtors' probability of default by outstanding loans. The dotted red line represents the maximum probability of default of 1.5% for additional credit claims (excluding loans with government guarantees).

As this *Bulletin* shows, a security's credit quality is not the determining factor in the choice of mobilisation, unlike its liquidity. More specifically, monetary policy counterparties pledge collateral with the central bank that is of relatively similar credit quality to that of the assets they hold. On the other hand, they tend to pledge more illiquid assets (ABS and credit claims) and less highly liquid assets (in particular HQLA securities). This behaviour could be linked to prudential constraints on liquidity ratios, which create an increased need for liquid assets.

During the Covid-19 crisis, the massive rise in refinancing required increased collateral mobilisation. Thus, in April 2020, a series of easing measures were introduced to avoid a shortage of collateral and to continue to ensure banks' access to Eurosystem refinancing. In particular, counterparties pledged securities and credit claims to cover their greater refinancing needs. However, the increase in available collateral has been less than proportional to that in refinancing, tightening banks' collateral constraints.



In the medium term, several factors will affect the mobilisation of collateral by monetary policy counterparties: (i) the phasing out of the collateral easing measures adopted in spring 2020 will reduce, all other things being equal, the collateral that banks can mobilise; (ii) the maturity

of the TLTRO III.4 refinancing operation in June 2023 and the subsequent operations will mechanically reduce the outstanding refinancing amount; and (iii) the end of the ACC frameworks¹⁴ scheduled for March 2024 will reduce the possibility of mobilising credit claims.

¹⁴ See ECB (2020), art. cit. (<https://www.ecb.europa.eu/>)



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Appendix

Determinants of the decision to pledge collateral: a quantitative exercise

This exercise formalises the determinants of the decision to pledge securities as collateral. We use SHSS data and observe for each security the holding and pledging with the Eurosystem by each banking sector in each jurisdiction, over the period from Q4 2013 to Q1 2021, at a quarterly frequency.

The left-hand side variable is a dummy variable that takes the value 1 when security i is pledged by banking sector S in quarter t , $X_{i,t}$, a vector of security characteristics (its rating, haircut, category, etc.) and $\gamma_{s,t}$ a fixed effect capturing the pledging behaviours specific to each banking sector at each date.

We estimate the following Logit model:

$$Is\ pledged_{s,i,t} = \alpha_{it} + \beta \times X_{i,t} + \gamma_{s,t} + \epsilon_{s,i,t}$$

Estimation of a Logit model

Dependent variable Model	Dummy: Is pledged			
	(1)	(2)	(3)	(4)
Variables				
Credit rating (1 = AAA)	-0.0570** (0.0044)	-0.0187*** (0.0052)	-0.0148*** (0.0044)	0.0623*** (0.0055)
ECB haircut (%)	-0.0294*** (0.0015)	-0.0340*** (0.0016)	-0.0360*** (0.0019)	-0.0304*** (0.0018)
Dummy: Government bond	-0.4073*** (0.0261)	-0.2080*** (0.0326)		
Dummy: Domestic bias	0.8276*** (0.0315)	0.8105*** (0.0330)	0.7876*** (0.0329)	0.7919*** (0.0318)
Type of security: Bond		-1.315*** (0.0377)		
Type of security: Covered bond		-1.187*** (0.0527)		
Type of security: Tbill/MTN/CP/CD		-1.159*** (0.0421)		
Liquidity class: L1B			0.6159*** (0.0396)	
Liquidity class: L1C			0.4825*** (0.0361)	
Liquidity class: L1D			0.5061*** (0.0542)	
Liquidity class: L1E			1.698*** (0.0570)	
Dummy: Level 1 HQLA				-0.3198*** (0.0223)
Fixed effects:				
Banking sector – quarter	Yes	Yes	Yes	Yes
Issuer country – quarter	Yes	Yes	Yes	Yes
Statistics:				
Observations	1,080,187	1,080,187	1,080,187	685,683
Pseudo-R2	0.11349	0.12117	0.12315	0.11496

Source: Banque de France.

Notes: Standard deviations in brackets.

Significance level: *** p-value \leq 0.01; ** 0.01 < p-value \leq 0.05; * 0.05 < p-value \leq 0.1.

R² measures the explanatory power of the model. Ranging from 0 to 1, it increases with the quality of the fit. The adjusted R² makes it possible to compare models that do not have the same number of explanatory variables and/or observations.



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