

Belke, Ansgar

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Ansgar Belke\*

# Eurosystem Collateral Policy and Framework – Post-Lehman Time as a New Collateral Space

Collateral plays a central role in monetary policy. In recent years, its importance has increased as uncollateralised inter-bank borrowing has gradually been replaced by collateralised central bank lending. This has in turn affected collateral availability and the need for high-quality assets. The European Central Bank has reacted to this development by creating a series of different measures to broaden collateral availability, including changing the eligibility rules (e.g. reducing rating thresholds for certain asset classes) or extending the eligible assets (e.g. allowing national central banks to accept bank loans as collateral). In the context of these developments, this article assesses and comments on various aspects of the Eurosystem collateral policy and overall framework. In particular, it examines the economic implications of the current ECB collateral policy for asset allocation and relative asset price developments from a cross-country perspective.

Collateral plays a key role in monetary policy.<sup>1</sup> Since the Lehman Brothers bankruptcy and the European debt crisis, its importance has increased even further as uncollateralised inter-bank borrowing has been replaced by collateralised central bank lending, which in turn has reduced collateral availability and increased the need for high-quality assets.<sup>2</sup> Moreover, collateral policy determines the attractiveness of certain asset classes such as covered bonds and asset-backed securities, which in turn are the (purchase) target of the most recent unconven-

tional monetary policy measures of the European Central Bank (ECB).<sup>3</sup>

Over the years, the ECB has reacted to this development by introducing a variety of specific measures designed to increase the availability of collateral. These have included changing the eligibility rules (e.g. reducing rating thresholds for certain asset classes) and extending the eligible assets (e.g. allowing national central banks to accept bank loans as collateral).<sup>4</sup>

The ECB database contains about 40,000 items of eligible collateral that have to be valued on a daily basis. This is partly for historical reasons: the broad collateral framework has been designed to make sure that commercial banks from all member countries are able to benefit from the Eurosystem's refinancing operations. Admittedly, this represents a big challenge, one which could become particularly acute in a crisis.<sup>5</sup>

\* An earlier version of this article was published as an EP Policy Brief IP/A/ECON/2014-04. The opinions expressed in this document are the sole responsibility of the author and do not necessarily represent the official position of the European Parliament.

- 1 See, for instance, U. Bindseil: Central bank collateral, asset fire sales, regulation and liquidity, ECB Working Papers 1610, European Central Bank, Frankfurt/Main 2013; European Central Bank: The monetary policy of the ECB, Frankfurt/Main 2011, Germany, pp. 93ff.; R.F.D.D. Chaudron: Collecting data on securities used in reverse transactions for the compilation of portfolio investment – How to compromise between theory and practice, in: Bank for International Settlements (ed.): IFC's Contribution to the 56th ISI Session, Lisbon 2007, IFC Bulletin 28, Basel, Switzerland; and Bundesbank: Allgemeine Geschäftsbedingungen der Deutschen Bundesbank, Bankrechtliche Regelungen 5, Frankfurt 2013, Germany, Chapter V.
- 2 J. Eberl, C. Weber: ECB collateral criteria: A narrative database 2001-2013, Ifo Working Paper No. 174, Munich, February 2014, p. 1.

3 C. Altomonte, P. Bussoli: Asset-backed securities: the key to unlocking Europe's credit markets?, Bruegel Policy Contributions, Issue 2014/7, July 2014.

4 For earlier overviews see, for instance, European Central Bank: The Eurosystem collateral framework throughout the crisis, ECB Monthly Bulletin, Frankfurt/Main, July 2013; and C. Hofmann: Central Bank Collateral and the Lehman Collapse, in: Capital Markets Law Journal, Vol. 6, No. 4, 2011, pp. 456-469.

5 European Central Bank: Joint interview of Benoît Coeuré, Member of the Executive Board of the ECB, and Joachim Nagel, Member of the Executive Board of the Deutsche Bundesbank, conducted by Mark Schroers of Boersen-Zeitung on 12 September 2013 and published on 18 September 2013, Frankfurt/Main 2013.

**Ansgar Belke**, University of Duisburg-Essen, Germany; and Institute for the Study of Labor (IZA), Bonn, Germany.

How has the ECB's collateral policy developed in recent years? Has liquidity provision been effective? For the latter, the ECB had to ensure that banks were technically able to collateralise the refinancing credit which they obtained from their home country's national central bank (NCB).<sup>6</sup> Yet this has led to some clustered shortages of collateral, and in turn posed the risk of hampering the transmission mechanism in some regions.<sup>7</sup> Collateral criteria thus played a major role during the crisis.<sup>8</sup> The ECB decision to maintain or even raise collateral availability favoured those assets whose eligibility would increase bank lending, particularly to small- and medium-sized enterprises (SMEs) and private households. This included asset-backed securities (ABS) as a securitised form of claims and credit claims as a non-securitised form.<sup>9</sup>

In more general terms, collateral policy has three important aspects. First, when there is stress in the markets, the central bank can counter the threat of collateral scarcity by increasing the eligible assets pool and thereby framing the markets' process of identifying high-quality assets.<sup>10</sup> Second, central bank lending (like all lending) entails non-negligible risks which are ultimately shouldered by the public sector and the taxpayer. Lending solely in exchange for good collateral could mitigate this problem.<sup>11</sup> In the light of the increasing degree of collateral scarcity, the main risk faced by central banks is credit risk. They could therefore define less liquid assets as eligible collateral as well. But this trade-off between liquidity and credit risk may restrict a central bank's flexibility by tying up parts of its balance sheet.<sup>12</sup> Third, when policy rates reach the zero lower bound and central banks grant liquidity to an unlimited extent, the eligible collateral un-

doubtedly plays a decisive role in setting the limits of expansionary monetary policy.<sup>13</sup>

Against this background, this paper discusses and assesses various aspects of the Eurosystem's collateral policy and overall framework. In particular, it considers the economic implications of the current ECB collateral policy for asset allocation and relative asset price developments in a cross-country perspective. Of course, a complete analysis of complex euro area collateral policy issues spanning multiple years is beyond the scope of this paper. However, Eberl and Weber provide a very comprehensive survey on Eurosystem collateral policy.<sup>14</sup>

### Eligibility and use of collateral: guiding principles

Contrary to its counterparts such as the US Federal Reserve Bank, which tends to work with a very small number of primary dealers, the ECB's monetary policy is decentralised, meaning that it interacts with numerous counterparties in the form of national central banks.<sup>15</sup> To be eligible as counterparties, financial institutions must be financially sound.

Article 18.1 of the Statute of the European System of Central Banks demands that all Eurosystem credit operations shall be backed by "adequate collateral". This concept of adequacy is based on two basic notions. First, collateral has to preserve the Eurosystem from losses through the bank's credit operations. Second, there has to be sufficient collateral provided to enable the Eurosystem to carry out its tasks.<sup>16</sup> While the "single list" of eligible assets constitutes the general framework, it is the ECB's collateral eligibility criteria for assets – the *general* and the *temporary eligibility rules* – that ensure collateral adequacy. Important eligibility criteria that were originally considered

6 J. Eberl, C. Weber, op. cit., p. 1.

7 P. Åberg: Recent developments in eligible and used collateral, European Central Bank, Financial Markets and Collateral, Frankfurt/Main, 22 January 2013.

8 See J. Eberl, C. Weber, op. cit., p. 1; I. Drechsler, T. Drechsel, D. Marques-Ibanez, P. Schnabl: Who borrows from the lender of last resort?, NYU-Stern and ECB, August 2013, mimeo; and U. Bindseil, op. cit.

9 P. Åberg, op. cit.

10 A. Levels, J. Capel: Is collateral becoming scarce? Evidence for the euro area, DNB Occasional Studies 1, Amsterdam 2012; and BIS Committee on the Global Financial System: Asset encumbrance, financial reform and the demand for collateral assets, CGFS Papers 49, Bank for International Settlements, Basel, May 2013.

11 A. Belke, T. Polleit: How much fiscal backing must the ECB have? The Euro area is not (yet) the Philippines, in: *Économie Internationale*, Vol. 124, 2010, pp. 5-30; J. Eberl, C. Weber, op. cit., p. 2; and P. Tucker: The repertoire of official sector interventions in the financial system: last resort lending, market-making, and capital, Remarks at Bank of Japan International Conference, May 2009.

12 A. Chailoux, S. Gray, R. McCaughrin: Central bank collateral frameworks: principles and policies, IMF Working Paper 222, September 2008.

13 U. Bindseil, op. cit., p. 26. Since the start of the financial crisis, the increase in the number of market participants has influenced the availability of collateral, among them central banks through their outright purchases of high-quality collateral. See, for instance, A. Belke: 3-Year LTROs – A First Assessment of a Non-Standard Policy Measure, Briefing paper prepared for presentation at the Committee on Economic and Monetary Affairs of the European Parliament for the quarterly dialogue with the President of the European Central Bank, March 2012; A. Belke: How Much Fiscal Backing Must the ECB Have? The Euro Area Is Not the Philippines, Briefing paper prepared for presentation at the Committee on Economic and Monetary Affairs of the European Parliament for the quarterly dialogue with the President of the European Central Bank, March 2010; M. Singh: The changing collateral space, IMF Working Paper No. 25, January 2013.

14 J. Eberl, C. Weber, op. cit.

15 Ibid., p. 4.

16 P. Åberg, op. cit.; J. Eberl, C. Weber, op. cit., p. 4; European Central Bank: Collateral eligibility – Follow-up to the Report to the report on "Collateral eligibility requirements – a comparative study across specific frameworks", Frankfurt/Main, July 2014.

temporary have since been incorporated into the general framework or are enforced without any expiration date.<sup>17</sup>

The actual transaction behind a monetary policy operation to provide liquidity usually represents a reverse transaction such as a collateralised loan or a repurchase agreement.<sup>18</sup> In the latter case, the NCB claims the collateral in case the counterparty defaults. The adjusted market value of the assets which are provided as collateral has to exceed the liquidity provision's volume throughout the whole period. To figure out the collateral's adjusted market value, a haircut is applied to the market value of the financial asset used as collateral.<sup>19</sup> This haircut is calculated according to the liquidity and the maturity of the security and thus represents the ECB's risk control measure to protect its balance sheet.<sup>20</sup>

Five general principles of the ECB's collateral framework are of central importance: (1) close links between counterparties, (2) provisions for controlling risk within the pool of collateral, (3) the valuation of eligible assets, (4) the European Credit Assessment Framework that the ECB uses to assess the eligible assets' credit quality, and (5) "segmental pooling".<sup>21</sup>

### Close links between counterparties

The non-eligibility of assets incorporating close links between counterparties was already contained in the initial General Framework dated 1 January 2001. If assets are guaranteed or issued by the counterparty submitting those, they were deemed ineligible (Directive 2000/12/EC). The most extreme case of close links is the own use of assets – for example, when an asset is both issued and pledged by the same party.<sup>22</sup> However, strict eligibility rules have been watered down in the wake of the crisis.<sup>23</sup>

Starting in February 2009, for instance, all debt instruments which are defined by close links between counterparties have been treated as eligible, as long as they are secured by the guarantee of a government of a eurozone

country and are in compliance with the general eligibility criteria. As of March 2015, however, the ECB will no longer accept as collateral government-guaranteed uncovered bank bonds or covered bonds with close links between counterparties.<sup>24</sup>

### Risk control measures

The risks incurred by the ECB when it conducts monetary policy operations comprise the risk of counterparty default as well as liquidity and market risks specific to the collateral. The ECB applies a number of measures to control risk to marketable and non-marketable assets in an effort to mitigate such risks. From March 2004 on, the ECB's most frequently used risk control measures were "valuation haircuts" and "variation margins". In 2010 the bank broadened its risk control framework to include the so-called "application of supplementary haircuts" and "limits in relation to the use of unsecured debt instruments".<sup>25</sup>

### Valuation of assets eligible as collateral

Valuation principles are very important because they establish rules for assessing assets that are used as collateral. The valuation assigned to assets forms the basis for the application of risk control measures and the granting of refinancing credits. Errors in the valuation of collateral impose significant risks for the conduct of monetary policy and the ECB's balance sheet. If an asset were overvalued and thus did not mirror the true underlying risk, the value of the collateralised security might not be sufficient to cover ECB losses in case of the counterparty's default.<sup>26</sup>

Valuation principles were broadly formulated in the initial General Framework. As is the case with the framework as a whole, these principles have been successively modified over time. The Eurosystem currently assesses the marketable assets' value on the basis of a representative price prevailing on the last business day before the valuation date. If two or more prices are quoted, the smallest price is used. If no such price is available, the last trading price is used. If the latter is not available or prices have not moved over the last five trading days, either the asset's theoretical value or, for reasons of simplicity, the outstanding amount is used. The Eurosystem applies additional valuation haircuts for the value of covered/uncovered bank bonds and ABSs not derived from a market price.<sup>27</sup>

17 I. Drechsler, et al., op. cit.; J. Eberl, C. Weber, op. cit., pp. 6ff.; and European Central Bank: Collateral eligibility ..., op. cit.

18 The counterparty can either opt for the earmarking system, in which every pledged asset is earmarked for one specific transaction, or a pooling system, in which assets are not earmarked for individual transactions. See J. Eberl, C. Weber, op. cit., p. 5.

19 J. Eberl, C. Weber, op. cit., pp. 5-6; European Central Bank: Collateral eligibility ..., op. cit.

20 J. Eberl, C. Weber, op. cit., Subsection 3.4.2.; D. Gros, C. Alcidi, A. Giovannini: Central banks in times of crisis – The Fed vs. ECB, Directorate General for International Policies, Policy Department A: Economic and Scientific Policies, June 2012, p. 10.

21 J. Eberl, C. Weber, op. cit., pp. 10ff.

22 J. Eberl, C. Weber, op. cit.

23 Ibid., pp. 10-11.

24 J. Eberl, C. Weber, op. cit., p. 35.

25 J. Eberl, C. Weber, op. cit., pp. 10ff.

26 J. Eberl, C. Weber, op. cit., pp. 14.

27 J. Eberl, C. Weber, op. cit., pp. 13-14.

## European Credit Assessment Framework

In January 2007, the ECB created the Eurosystem Credit Assessment Framework to evaluate the credit standing of collateral employing different credit assessment sources. The ECB had imposed a distinct hierarchy of credit ratings: type of issue comes first, followed by the issuer and then the guarantor. NCBs are said to have occasionally violated this hierarchy by classifying assets in the wrong rating categories – always erring in favour of the banks that submitted the securities.<sup>28</sup> In September 2013, the ECB modified, i.e. watered down, the credit ranking by de facto equating issuer and guarantor in the credit ranking hierarchy.<sup>29</sup>

### Segmental pooling

The ECB employs its measures of risk control, usually “valuation haircuts”, to attenuate the risks inherent in granting refinancing credits. These haircuts do not increase with lower credit ratings, however, but differ by the coupon structure and the respective residual maturity and the liquidity categories in which assets are classified.<sup>30</sup>

Drechsler et al. report that, contrary to the private market, the ECB subsidises with its haircut policy some assets to the disadvantage of others.<sup>31</sup> In particular, they find that haircut subsidies turn out to be small for non-risky collateral but large in case of less safe collateral. This makes plausible that the pooled haircut value relates to the risk profile of a fairly safe asset and not to that of the lowest-rated asset within each segment. This subsidy on low-rated eligible collateral in terms of requirements for refinancing credits constitutes an incentive for counterparties to progressively use riskier assets as collateral underlying the ECB’s refinancing credits.<sup>32</sup>

### Changing the eligibility rules to increase collateral availability

We now assess both in quantitative and qualitative terms the extent to which the ECB’s eligible collateral pool has been broadened since the onset of the crisis. We provide an overview of the chronological sequence of the changes, structured by asset classes. We define a reduction of rating thresholds for certain asset classes as a typi-

cal change in a collateral eligibility rule. The following two items are prominent examples of such changes.<sup>33</sup>

*Example 1:* The ECB’s effort to shape and bring into force a coherent collateral framework was brought to an abrupt halt in September 2008 by the Lehman collapse. In October 2008, the ECB reduced the minimum credit rating threshold for eligible assets (excluding ABSs) from “single A” to “triple B”.<sup>34</sup> With this move, the ECB central bank initiated one of the most sweeping changes ever to its collateral framework. What is more, the ECB employed a uniform add-on haircut on all eligible assets rated lower than single A in order to cope with the additional risk implied by such low-rated assets. This reduction was initially planned as a temporary measure, but became permanent in January 2011 when the lowered minimum credit rating threshold became part of the General Framework.

*Example 2:* In February 2009, the ECB passed an amendment which may at first appear minor but is highly significant in practice. The group of accepted External Credit Assessment Institutions (ECAIs) was expanded to include a fourth one, the Dominion Bond Rating Service (DBRS). Compared to the “big three” rating agencies – S&P, Moody’s and Fitch, which together hold a market share of about 95 per cent – DBRS is a small Canada-based agency. Admittedly, taking into account one additional ECAI may spur competition and improve information on collateral quality. If assessments among rating agencies differ, however, a tiny rating agency is granted the potential to affect refinancing conditions of European commercial banks. The experience with the long-term credit ratings of the four ECAIs for Ireland, Italy and Spain clearly reveal that the DBRS ratings have been pivotal.<sup>35</sup>

### Expanding the set of eligible assets

Allowing national central banks to accept bank loans as collateral may be regarded as one of several measures that expanded the set of assets eligible for collateral. Here we provide some examples.

#### Debt instruments issued or guaranteed by governments

Government guarantees for risky assets are important because they represent a risk for taxpayers in case of default and they are able to impact the valuation and thus the credit rating of the collateral, which affects the refinancing conditions.

28 M. Brendel, S. Jost: EZB leistet sich gefährliche Regelverstöße, in: Die Welt, 7 April 2013.

29 J. Eberl, C. Weber, op. cit., pp. 13-14.

30 J. Eberl, C. Weber, op. cit., pp. 11ff., 19ff.

31 I. Drechsler et al., op. cit.

32 J. Eberl, C. Weber, op. cit., pp. 16ff.

33 J. Eberl, C. Weber, op. cit., p. 21.

34 Note that “triple B” marks the last rating notch above junk status.

35 J. Eberl, C. Weber, op. cit., pp. 14ff.



The minimum credit rating threshold for government-related assets had already been diminished to “triple B” when the minimum rating was similarly lowered for all assets, except for ABSs, in October 2008. Nevertheless, several countries had to make strong efforts to reach even this threshold.<sup>36</sup> In order to accept these debt instruments as collateral, the ECB decided to suspend the application of the minimum credit rating threshold for debt instruments guaranteed or issued by the governments of Greece (May 2010), Ireland (April 2011), Portugal (July 2011) and Cyprus (May 2013). At the same time, the ECB declared that it would review “the relevant risk control measures [...] on a continuous basis”.<sup>37</sup>

However, since this decision, tenets for valuation haircuts have been altered for Cyprus and Greece but not for Portugal and Ireland. Hence, for the latter countries, the ECB is effectively applying the same valuation haircut to, for instance, a “C”-rated bond as to a “BBB+”-rated bond.<sup>38</sup>

However, given that Greek debt was apparently accepted as collateral to raise market liquidity, it would be counterproductive to insist on a large haircut. Thus, it appears that the ECB’s aim to promote the liquidity of Greek debt will necessarily increase the bank’s exposure to the risk of capital losses on exactly that type of debt. If such losses occur, the ECB can at best hope to receive compensation, for instance through a (gradual) re-capitalisation by euro area governments.<sup>39</sup>

The ECB broadened the eligibility of own-use assets to every asset with government guarantees in February 2009. This enabled market participants to securitise assets into bonds they retain. These bonds are, however, never evaluated by a rating agency or the market per se. Due to the government guarantee, they can also still be employed as collateral for refinancing credits. What is more, the conditions for valuation haircuts would appear favourable to market participants if the rating of the government providing the guarantee is higher than that of the issuer. On the date the guidelines setting out the eligibility of own-use government-guaranteed debt instruments were implemented, new issuances of bonds guaranteed by governments skyrocketed. Declaring these bonds eligible in combination with abandoning the minimum credit rating has thus pushed a significant share of these bonds

into reverse transactions underlying refinancing credits at the ECB.<sup>40</sup>

### Debt instruments traded on non-regulated markets

The initial General Framework has already incorporated the condition that marketable assets have to be permitted to be traded on accepted regulated and non-regulated markets.<sup>41</sup> The ECB has successively altered its eligibility criteria, thereby raising the number of eligible non-regulated markets over time.<sup>42</sup>

When strict rules are applied for the admission of non-regulated markets, the risk assumed by the ECB for the eligibility of assets traded on those markets is approximately the same as it is for assets traded on regulated markets. However, the ECB explicitly denied pursuing the goal of exhaustively evaluating the intrinsic quality of non-regulated markets. Furthermore, the three principles that the ECB established to accept non-regulated markets have not been applied in a consistent way and are thus of questionable effectiveness. In particular, transparency which is meant to grant the ECB “unimpeded access to information on the market’s rules of procedure and operations, the financial features of the assets, the price formation mechanism, and the relevant prices and quantities”<sup>43</sup> has not only been suspended repeatedly but has also not been applied rigorously.<sup>44</sup>

### Asset-backed securities, corporate bonds and bank bonds

Figure 1 summarises the evolution of asset-backed securities as eligible collateral over time.

When asked about the ratings of the ABSs that the ECB would purchase, Mario Draghi replied that the ECB had been accepting ABSs as collateral for ten years. Hence, he argued, it was logical to maintain the ECB’s standard collateral rules for purchases. However, Draghi also clarified once more that ABS purchases bear a larger risk than ABSs accepted as collateral in refinancing operations.<sup>45</sup>

Corporate bonds have always been eligible for collateral purposes under the condition that they comply with the

36 J. Eberl, C. Weber, op. cit., p. 25.

37 European Central Bank: ECB announces the suspension of the rating threshold for debt instruments of the Irish government, Press Release, 31 March 2011, Frankfurt/Main.

38 J. Eberl, C. Weber, op. cit., p. 26.

39 A. Belke, T. Polleit, op. cit.; S. Gerlach: The Greek sovereign debt crisis and ECB policy, Document requested by the European Parliament’s Committee on Economic and Monetary Affairs, Brussels, 8 June 2010, p. 8.

40 J. Eberl, C. Weber, op. cit., pp. 24ff.

41 A market has to obey criteria defined by the Investment Services Directive (93/22/EEC) in order to be regarded as “regulated”.

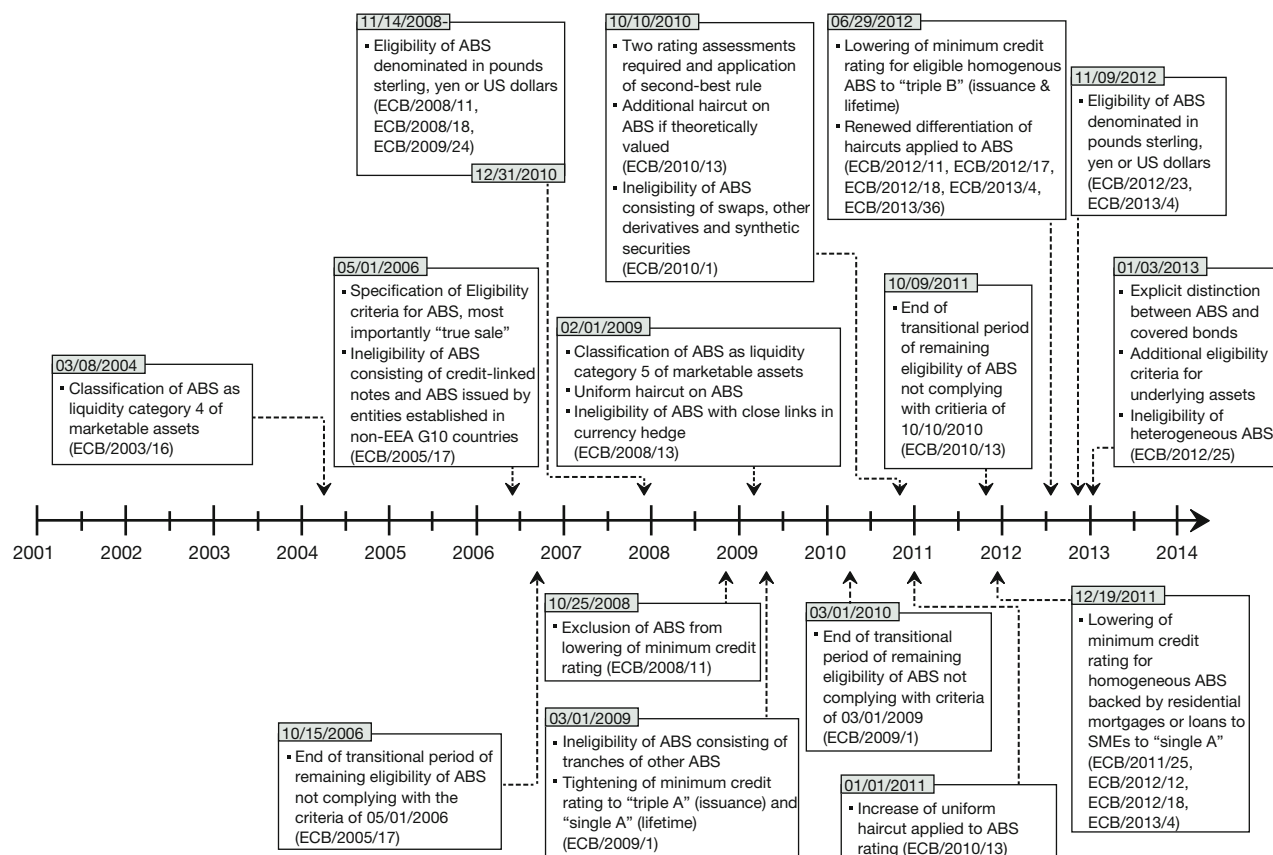
42 J. Eberl, C. Weber, op. cit., p. 28.

43 Guideline ECB/2005/2 amending guideline ECB/2000/7 on monetary policy instruments and procedures of the Eurosystem, footnote 48.

44 For further details see J. Eberl, C. Weber, op. cit., pp. 28–31.

45 M. Draghi: Introductory statement to the press conference (with Q&A), Naples, 2 October 2014; M. Draghi: Introductory statement to the press conference (with Q&A), Frankfurt/Main, 6 November 2014.

Figure 1  
Evolution of eligibility of asset-backed securities



Source: J. Eberl, C. Weber: ECB collateral criteria: A narrative database 2001-2013, Ifo Working Paper No. 174, February 2014, p. 36.

general criteria for the eligibility of marketable assets. Corporate bonds have therefore also been subject to all of the general changes in the eligibility criteria that have been applied to marketable assets,<sup>46</sup> although no specific provisions have been established to date.<sup>47</sup>

Due to space limitations, this paper does not discuss bank bonds. However, important details can be found in Eberl and Weber.<sup>48</sup>

### Main patterns of ECB collateral policies

Table 1 summarises the ECB's most significant collateral policy actions during the period 2001-2013.<sup>49</sup> Two crucial stylised facts emerge from the qualitative analysis

above.<sup>50</sup> The ECB intensified its collateral policy activity beginning in 2008 in response to the crisis and then again in 2011. This activity was preponderantly targeted at softening eligibility criteria (intensive margin) while also expanding the eligible collateral pool (extensive margin).

The ECB enlarged the pool of eligible collateral in quantitative terms, i.e. at the extensive margin. The ECB's policy of full allotment of refinancing credit ensured that banks disposed of a critical mass of paper to collateralise their refinancing credit.<sup>51</sup> This process is sketched in Figure 2 with an index for the breadth of the collateral pool. The index shows a quantitative increase in the breadth of the collateral pool equivalent to a factor of 36.<sup>52</sup>

However, the ECB also extended its pool of eligible collateral *qualitatively*, i.e. at the intensive margin. This index displays a qualitative enlargement of the collateral pool

46 This is discussed at length in J. Eberl, C. Weber, op. cit., pp. 19ff.

47 J. Eberl, C. Weber, op. cit., p. 40.

48 J. Eberl, C. Weber, op. cit., pp. 31-35.

49 Some additional though less detailed information about the use of collateral by the ECB which includes the year 2014 can be found in G. Illing, P. König: The European Central Bank as lender of last resort, DIW Economic Bulletin No. 9.2014, Berlin 2014, pp. 16-28, here p. 21.

50 J. Eberl, C. Weber, op. cit., p. 41.

51 Ibid.

52 J. Eberl, C. Weber, op. cit., pp. 42-43.

Table 1  
ECB collateral policy actions, 2001-2013

Date	Action	Classification	
		tight- ening	loos- ening
5/30/2005	Ineligibility of equities	•	
1/1/2007	Abolition of idiosyncratic eligibility criteria (introduction of Single List)	•	
9/15/2008	Collapse of Lehman Brothers		
10/25/2008	Lowering of minimum credit rating for all assets except ABSs from “single A” to “triple B”; Eligibility of bank bonds traded in the STEP market		•
11/14/2008	Eligibility of marketable debt instruments issued in pounds sterling, yen or US dollars		•
2/1/2009	Eligibility of own-use government-guaranteed debt instruments; DBRS accepted as fourth ECAI		•
3/1/2009	Increase of minimum credit rating for ABSs from “single A” to “triple A” at issuance	•	
06/05/2010 01/04/2011 07/07/2011 03/05/2013 09/05/2013	Suspensions of minimum credit rating for debt instruments issued or guaranteed by the governments of Greece, Ireland, Portugal; later by governments under an EU/IMF programme and Cyprus		•
12/19/2011	Idiosyncratic acceptance of credit claims by NCBs; Lowering of minimum credit rating for specific ABSs from “triple A” to “single A” at issuance		•
7/29/2012	Lowering of minimum credit rating for all ABSs from “single A” to “triple B” at issuance and cover lifetime		•
1/3/2013	Ineligibility of heterogeneous ABSs	•	

Source: J. Eberl, C. Weber: ECB collateral criteria: A narrative database 2001-2013, Ifo Working Paper No. 174, February 2014, pp. 40-41.

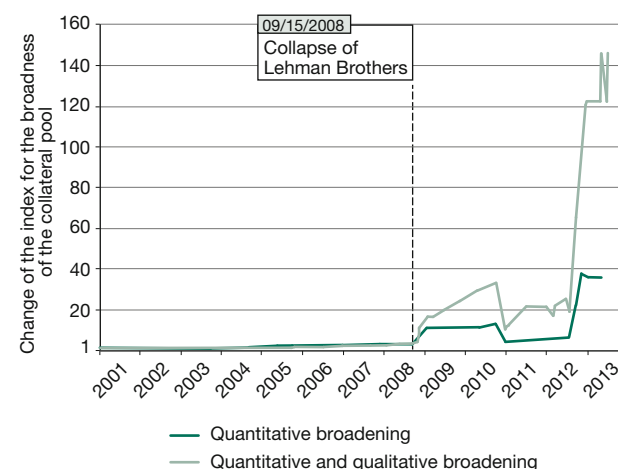
by a factor of 110. In other words, the quality standards for eligible collateral had been significantly lowered by the end of 2013.<sup>53</sup> The much greater qualitative broadening since the collapse of Lehman Brothers compared to the quantitative expansion of the collateral base stands in sharp contrast to common calls for appropriate collateral.

### Economic implications of the current ECB collateral policy

We will now use a cross-country perspective to consider the economic implications of the current ECB collateral

53 J. Eberl, C. Weber, op. cit., pp. 44-45.

Figure 2  
Broadening of the eligible collateral pool



Source: J. Eberl, C. Weber: ECB collateral criteria: A narrative database 2001-2013, Ifo Working Paper No. 174, Munich, February 2014, p. 44.

policy for asset allocation and relative asset price developments.

### Implications for asset allocation in the euro area

The analysis presented above shows that the collateral framework has produced two major effects over time. First, the Eurosystem reached its target of increasing the available *quantity* of collateral. Second, this in turn worsened the *quality* of the ECB's pool of collateral for refinancing credits.<sup>54</sup> This latter effect has been the most important element of the ECB's toolbox. It allows NCBs to grant large-scale special loans to their national commercial banks.<sup>55</sup> In order to guarantee the value of the collateral, the ECB started to buy collateral, starting with €223 bn of sovereign bonds and now committing itself to ABS purchases.

However, these measures will create an incentive for commercial banks to construct new ABS paper (which may become increasingly toxic) to clean up their balance sheets.<sup>56</sup> Moreover, the banks' equity capital will be artificially increased due to the increase in the value of the non-sold assets. Hence, policymakers should first check whether this kind of collateral policy represents a hidden fiscal rescue of commercial banks, and if so, whether this

54 J. Eberl, C. Weber, op. cit., p. 18.

55 G. Illing, P. König, op. cit., pp. 21-22.

56 See, however, M. Draghi: Introductory statement to the press conference (with Q&A), Naples, op. cit., who cites evidence in favor of much less risk in terms of default probabilities contained in euro area ABSs than in the US ABSs.



was the intended aim. Second, policymakers should scrutinise whether this approach is compatible with the commonly formulated European target of closing the investment gap in the euro area. It seems counterproductive to use the ECB's collateral policy to re-channel savings towards the eurozone periphery. Indeed, ABS purchases resulting from an overly lax ABS collateral policy could do precisely that, yielding the risk of a similarly destructive impact on both the public sector and the real estate sector as in the years before the euro crisis.<sup>57</sup>

### The cross-country perspective

Several papers have contrasted the collateral frameworks of various central banks. Chailloux et al., for instance, evaluate major central banks' initial policy reactions to the financial crisis.<sup>58</sup> They also assess the collateral policies implemented in parallel with various other measures. Chailloux et al. and Cheun et al. survey the principles that have shaped the collateral frameworks of central banks worldwide, explain adaptations of these principles during the first years of the crisis and compare the degree of similarity among them.<sup>59</sup>

One major reason for the different responses of central banks in terms of collateral policy was discussed by Gros et al., among others: the first stage of the financial crisis, i.e. 2007-2009, looked similar in the US and the euro area.<sup>60</sup> As a consequence, policy responses were also quite similar. The second stage of the crisis, however, was unique to the euro area.

### Further issues

Collateral policy determines the attractiveness of certain asset classes, which in turn are the target of the ECB's current purchases (asset-backed securities, covered bonds and soon perhaps corporate bonds as well). It is important to prevent the resulting incentives from unlock-

ing these asset markets to an excessive extent through the loosening of collateral standards.<sup>61</sup>

A key problem is the permanent nature of the "crisis collateral framework", which was originally intended to remain in place only on a temporary basis.<sup>62</sup> Exiting from these exceptional collateral policies will be no less difficult than abandoning unconventional monetary policies in general; the ECB will be confronted with tricky questions of how to get rid of the purchased assets as soon as the economic environment has improved.<sup>63</sup>

### Policy trade-offs

Finally, there seems to be a trade-off between the short-to medium-term efficiency of unconventional monetary policy effectiveness and the risk aversion of the ECB in terms of collateral policy. Overall, the ECB has responded forcefully to the crisis through "credit easing" and is at the same time striving to minimise its own risks. This pursuit of two opposing objectives implies that its policy has not been and will not be entirely effective.<sup>64</sup>

In the same vein, there is now a danger that other ECB instruments might also be decreasing in their effectiveness. The implementation of its longer-term refinancing operations (LTROs) is one example. When the ECB extended long-term funding against an expanded pool of eligible collateral assets, it also significantly raised the haircuts applied to these assets, sometimes by 50 to 75 per cent. This implies that *substantial over-collateralisation* is needed to get access to LTRO financing. For instance, commercial banks have to pledge assets with a market value somewhere between two to four times the value of the loan received, which may make commercial banks more reluctant to borrow from the central bank. Hence, in case of insolvency, the claims of unsecured creditors of banks will be met only to a minor extent. Private investors will thus hesitate even more to endow commercial banks with funding. One dire consequence of this is that the LTROs might not be successful if they are ever attempted again.<sup>65</sup>

### Conclusions and policy implications

NCBs have in the past sometimes been too lenient with respect to the valuation and the eligibility of collateral. There is the risk that NCBs and other market participants might try to circumvent the ECB and Eurosystem collater-

57 A. Belke, A. Oeking, R. Setzer: Exports and capacity constraints – A smooth transition regression model, ECB Working Papers No. 1740, European Central Bank, Frankfurt/Main 2014.

58 A. Chailloux, S. Gray, U. Klüh, S. Shimizu, P. Stella: Central bank response to the 2007-08 financial market turbulence: experiences and lessons drawn, IMF Working Paper 210, September 2008.

59 See A. Chailloux, S. Gray, R. McCaughrin, op. cit.; and S. Cheun, I. Köppen-Mertes, B. Weller: The collateral frameworks of the Eurosystem, the Federal Reserve System and the Bank of England and the financial market turmoil, ECB Occasional Paper Series 107, December 2009. Studies on these topics have also been provided by the European Central Bank: Collateral eligibility requirements – A comparative study across specific frameworks, ECB Study, Frankfurt/Main, July 2013; and by the BIS Markets Committee: Central bank collateral frameworks and practices, Report by a Study Group established by the BIS Markets Committee, March 2013, which compares 16 central banks around the world.

60 D. Gros et al., op. cit.

61 P. Åberg, op. cit.; U. Bindseil, op. cit.

62 J. Eberl, C. Weber, op. cit., p. 7.

63 S. Gerlach, op. cit., p. 8.

64 D. Gros et al., op. cit., p. 18.

65 Ibid.

al rules.<sup>66</sup> Above all, NCBs should be prevented from exploiting loopholes present in the collateral framework with the intention of unduly promoting their domestic commercial banks.<sup>67</sup>

As regards the ECB, a key governance challenge is to guarantee a strong commitment by the Governing Council to enforcing collateral rules. The valuation of collateral should also be based on a systematic monitoring of market data. One of the main tasks of the Governing Council is the regular review of the adequacy of risk control measures in the collateral framework. The single collateral framework shall be applied in the same way by all central banks.

As long as the risks can be shifted from the taxpayers in one euro area member state to those in another through “collateral rule arbitrage” or another of the ECB’s unconventional monetary policies, statements like “[a]ll central banks must have the same interest: to reduce the risk stemming from our operations. If there is a loss it is a loss for all of us ...” may be wishful thinking.<sup>68</sup> In the same vein, one may question whether the unanimous agreement in the Governing Council to install a compliance unit and a collateral experts network at the ECB to search for inconsistencies and factual errors in the eligible asset database is a corroboration of the common will of the Governing Council.<sup>69</sup> In addition, one may ask how non-partisan and non-biased the “collateral experts” are. Are they unaffected by the collateral policy choices of the ECB?

In the future, policymakers should strive for a simplification of the collateral system, while not forgetting that keeping collateral available to all counterparties in the euro area is crucial in enabling the implementation of proper monetary policy.<sup>70</sup> Furthermore, they should ensure that the increasing degree of complexity of the system does not induce the Eurosystem to overstretch its lending to financial institutions – admittedly, a technically demanding task.

The overall aim of policymakers should be to eradicate all of the temporary measures instituted during the crisis as soon as the situation in the financial markets allows. One should not leave any of these assets in the permanent list, because they entail risks that would fragment the framework for European monetary policy. The general collateral

framework could be expanded if high creditworthiness standards were employed.<sup>71</sup>

What should be strictly avoided is the treatment of the collateral framework as not only an instrument for risk control purposes but also as a monetary policy instrument.<sup>72</sup> Collateral policy should not address country-specific monetary policy issues. Applying country-specific collateral requirements would ultimately mean that financial risks would be redistributed among countries.<sup>73</sup>

Things look more ambiguous with regard to problems related to the shortage of collateral in specific countries. There is no consensus among economists on whether the two distinct goals of repairing the monetary transmission mechanism via the expansion of the collateral framework and protecting the ECB from assuming excessive risks can both be achieved.<sup>74</sup> Some of the arguments cited in the previous sections would suggest no.

According to some observers, the acceptance of e.g. Greek debt instruments as collateral, accompanied by direct purchases of the same items in secondary markets, increases risks for the ECB’s balance sheet. Others argue that the ECB should not worry about risks and losses from its collateral policies because central banks can operate with negative equity capital.<sup>75</sup> While this is technically and legally true, it would ultimately undermine confidence and trust in the euro. For these reasons, it should not be permitted.

One key question is who will review “the relevant risk control measures [...] on a continuous basis” and how.<sup>76</sup> Are auditors sufficiently independent and capable to contribute to the success of unconventional collateral policies which serve the euro area as a whole? What is the operational power of the ECB compared to the 18 NCBs of the euro area, which perform the bulk of the day-to-day work? As an example, the ECB has around 1,600 employees, about one-sixth of the number of people working for the German Bundesbank. Can this relatively lean infrastructure effectively monitor the NCBs?<sup>77</sup>

66 European Central Bank: Joint interview of Benoît Coeuré ..., op. cit.

67 And closely connected with that: a commercial bank may only obtain Emergency Liquidity Assistance credit if its collateral pool is fully exhausted. But in this case, the bank tends to not only have a liquidity problem but a solvency problem as well. G. Illing, P. König, op. cit. discuss this issue in the context of a “constructive ambiguity” in the behaviour of the Eurosystem which cannot prevent moral hazard.

68 European Central Bank: Joint interview of Benoît Coeuré ..., op. cit.

69 Ibid.

70 Ibid.

71 Ibid.

72 For instance, U. Bindseil, op. cit. assesses how the collateral framework can be interpreted beyond its essential aim of protecting the central bank, for example as a financial stability and unconventional monetary policy instrument.

73 European Central Bank: Joint interview of Benoît Coeuré ..., op. cit.

74 ECB representatives like Benoît Coeuré, however, tend to support this view. See European Central Bank: Joint interview of Benoît Coeuré ..., op. cit.

75 A. Belke, T. Polleit, op. cit.; and European Central Bank: Joint interview of Benoît Coeuré ..., op. cit.

76 See, for instance, [https://www.ecb.europa.eu/press/pr/date/2011/html/pr110331\\_2.en.html](https://www.ecb.europa.eu/press/pr/date/2011/html/pr110331_2.en.html).

77 See, for instance, M. Brendel, S. Jost, op. cit.