

## **Attachment: Assessment of a sectoral systemic risk buffer**

*In Norges Bank's framework for advice on the systemic risk buffer (SyRB) one of the principles for advice on the SyRB is that "The systemic risk buffer should as a main rule apply to all exposures in Norway. This is because the effect of structural vulnerabilities on banks in a downturn is uncertain. However, in situations where vulnerabilities in individual sectors are particularly high and where more targeted measures are insufficient or unavailable, an SyRB for a subset of sectoral exposures can be considered."*

*A number of countries have introduced sectoral SyRBs in recent years. In its 2023 Article IV assessment of Norway, the IMF points out the need for more macroprudential instruments, such as gradually introducing a sectoral SyRB for commercial real estate (CRE) exposures. The European Systemic Risk Board (ESRB) has recommended that all countries in Europe monitor CRE sector vulnerabilities and introduce measures where appropriate.*

*In this attachment, we assess the need for replacing all or parts of the general SyRB with a sectoral SyRB in Norway. A sectoral SyRB for CRE exposures is most relevant because banks' CRE exposures are substantial and bank losses may be large. In Norges Bank's view, however, proposing the introduction of a sectoral SyRB is not suitable for Norway.*

### **1. Regulations and SyRBs in other countries**

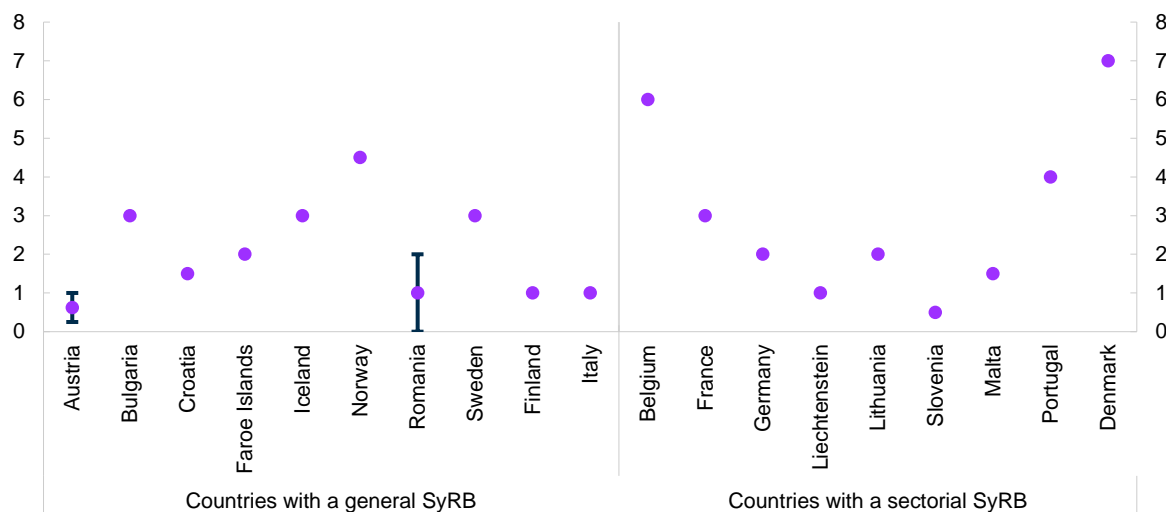
#### *EU framework*

According to the applicable EU capital framework, CRR II/CRD V, the SyRB is used to mitigate systemic risks that are not covered by other requirements, such as the countercyclical capital buffer and the buffer for systemically important banks. An SyRB can be introduced for all or parts of the financial sector, and for all or parts of banks' exposures. If an SyRB applies to exposures to individual sectors, it is referred to as a sectoral SyRB. According to the framework, a sectoral SyRB may, for example, apply to retail exposures secured by residential property or to exposures to legal persons secured by commercial real estate. The European Banking Authority (EBA) has provided more detailed guidelines for possible exposure subsets for a sectoral SyRB based on, among other things, industry codes. According to forthcoming EU regulation, CRRIII/CRD VI, SyRBs can be used to mitigate systemic risks related to climate change.

#### *SyRBs in other countries*

A total of 19 countries in Europe have introduced, or proposed introducing, an SyRB. The designs and justifications vary. Ten countries have an SyRB that applies to total exposures or all domestic exposures. Among these countries, Norway has the highest buffer requirement, at 4.5 percent, while three countries have SyRB rates of 3 percent and the rest have lower SyRB rates (Chart 1). Finland and Bulgaria have justified their SyRBs by citing a large banking sector among other things, while Iceland and the Faroe Islands have mainly cited the vulnerability of their small and open economies to external shocks. Croatia has cited, among other things, high debt in the public sector and banks' exposure to this sector. In Romania, the SyRB rate varies based on the share of banks' non-performing loans. In Sweden and Austria, SyRBs are only applicable to systemically important banks, and the similarities between these banks are the primary reason for the buffer. Italy has recently proposed an SyRB of 1 percent from June 2025 to increase banking sector resilience.

Chart 1. Countries with SyRBs. Buffer rates in percent (lines show variability in SyRB rates for banks)



Sources: Countries' notifications to the ESRB, Banca D'Italia, Systemic Risk Council of Denmark and Norges Bank

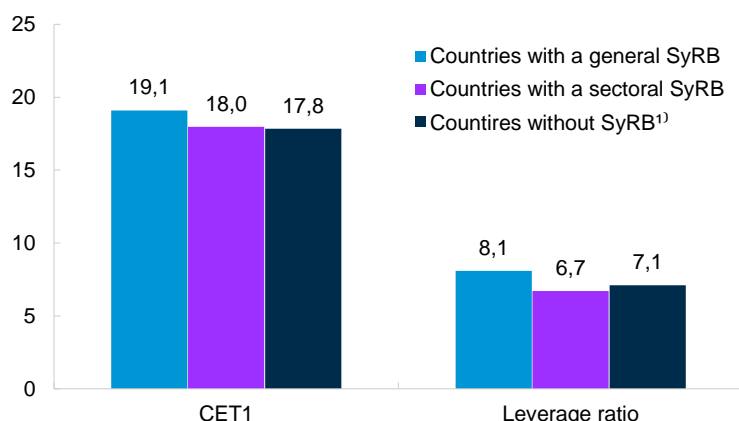
Nine European countries have introduced, or proposed introducing, a sectoral SyRB. This has been done by all eight countries in recent years, and they have not previously had SyRBs. Sectoral SyRB rates vary between 0.5 and 7 percent. In six of the countries, the sectoral SyRB applies to residential mortgages. In Liechtenstein, sectoral SyRBs have been introduced for both residential mortgage and CRE exposures. In France, a sectoral SyRB has been introduced for systemically important banks' exposures to large non-financial corporations with high debt levels. In Denmark, the Systemic Risk Council has proposed the introduction of a sectoral SyRB for real estate exposures. This is justified by the particular vulnerability of the real estate sector to losses during the financial crisis in 2008, and banks' large and increasing real estate exposures.

Many of the countries that have sectoral SyRBs for residential mortgage exposures cite high household debt levels and signs of an overvalued housing market. Housing market overvaluation is a typical cyclical vulnerability and implies that buffer requirements can be adjusted fairly often. Belgium has reduced its buffer requirement from 9 to 6 percent and Slovenia has recently announced a reduction from 1 to 0.5 percent. Both countries mainly justified the change by citing less housing market overvaluation and improved credit quality, which entails lower risk of substantial bank losses on residential mortgage exposures.

On average, countries with sectoral SyRBs have lower overall capital ratios than countries with a general SyRB (Chart 2). This may reflect the introduction of sectoral SyRBs instead of risk-weight floors for IRB banks in certain countries such as Belgium and Portugal. Moreover, the significance of sectoral SyRBs is limited for the overall banking sector capital ratio. Calculations by some countries indicate that a sectoral SyRB for residential mortgage exposures of between 1 and 2 percent increases the overall capital ratio in the banking sector by between 0.2 and 0.3 percent.<sup>1</sup>

<sup>1</sup> In Germany, the 2 percent sectoral SyRB for residential mortgage exposures is estimated to increase the overall CET1 capital ratio by 0.2 percentage point (see Geiger, S. (2002) "[Systemic risk buffer and residential real estate loans: the steering effect of sectoral buffer application](#)". *Technical Paper 04/2022*. Deutsche Bundesbank). In Lithuania, a corresponding SyRB rate is estimated to increase the overall CET1 ratio by 0.3 percentage point (see [notification sent to the ESRB from the Bank of Lithuania published 22 March 2022](#)). In Slovenia, a corresponding 1 percent rate is estimated to increase the overall CET1 ratio by 0.2 percentage point (see [notification from Bank of Slovenia published 14 June 2022](#)).

Chart 2. Average bank capital ratios at end of 2023 in groups of countries. Percent



1) Includes Denmark and Italy which have proposed, but not implemented, an SyRB.  
Sources: EBA, countries' notifications to the ESRB and Norges Bank

Estimates of changes in credit standards and lending volumes owing to sectoral SyRBs vary. Studies from Lithuania, Slovenia and Switzerland estimate falls in residential mortgage lending of between 1.5 and 6.0 percent with a sectoral SyRB of 1 or 2 percent.<sup>2</sup> In Germany, a study conducted prior to implementation showed a decline in residential mortgage lending relative to other lending, while a more recent study in Germany finds minimal effects on credit standards in a scenario with solid banking sector profitability, as is currently the case.<sup>3</sup>

## 2. Assessment of a sectoral SyRB for CRE exposures in Norway

There are reasons to consider introducing a sectoral SyRB. The purpose of a sectoral SyRB should be to build resilience in banks with the largest exposure to a sector. A sectoral SyRB can achieve this more effectively than a general SyRB if certain sectors pose the largest risk of losses, and banks' exposures to these sectors differ.

*The CRE sector has been the greatest source of bank losses during crises*

A large portion of banks' lending is to CRE firms, approximately 45 percent of total corporate exposures. Banks also have substantial exposures to real estate developers and building contractors, 10 and 3 percent of total corporate exposures, respectively. Some of these firms' operations include commercial building construction.

Even though bank losses on CRE exposures have historically been low in normal times, CRE is the sector where losses have been highest during crises (Chart 3). During the banking crisis between 1988 and 1993, CRE losses accounted for approximately one third of exposures to the sector. Banks' losses since the crisis have been fairly high in other sectors, such as aquaculture in the early 2000s and oil-related activities following the fall in oil prices

<sup>2</sup> See [notification sent to the ESRB from the Bank of Lithuania published 22 March 2022](#) and from the [Bank of Slovenia, published 14 June 2022](#). For Switzerland, which has a sectoral SyRB for residential mortgage exposures, no effect was found for the banking sector as a whole, but effects were identified for banks with low capital ratios relative to capital requirements (see Basten, J. (2020) "[Higher Bank Capital Requirements and Mortgage Pricing: Evidence from the Counter-Cyclical Capital Buffer](#)". Review of Finance, 24 (2), Marchs, pp 453–495).

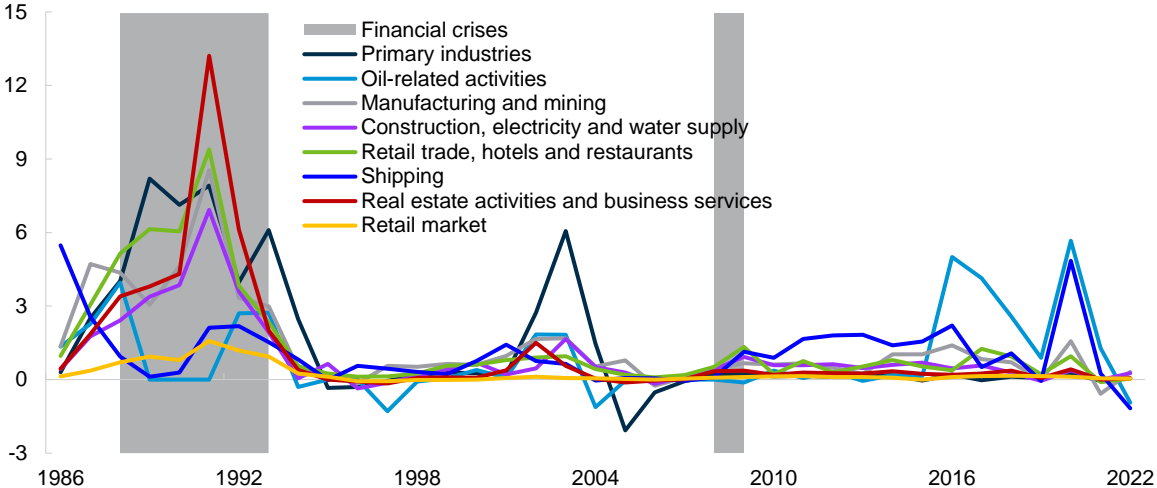
<sup>3</sup> See Geiger, S. (2022) "[Systemic risk buffer and residential real estate loans: the steering effect of sectoral buffer application](#)" *Technical Paper* 04/2022. Deutsche Bundesbank and Lang, J. Menno, D. (2023) "[The State-Dependent Impact of Changes in Bank Capital Requirements](#)". Deutsche Bundesbank.

in 2014. However, the impact on the banking sector was limited by lower lending to these sectors.

High exposure and the risk of substantial losses during crises may suggest introducing a sectoral SyRB for CRE exposures. Moreover, the CRE sector differs from other sectors as loans are usually secured on property. Problems in one firm can lead to a fall in commercial property prices if properties are sold, and problems can thus spread to other firms that experience falling property prices (pecuniary externality).

Residential mortgages are also secured by property and when house prices fall, the mechanisms correspond to those in the CRE sector, ie a pecuniary externality. Retail lending losses have been low historically (Chart 3), reflecting the fact that residential mortgages are to private individuals and not to limited liability companies. On the other hand, households can tighten their consumption and thus inflict losses on banks' corporate exposures. A sectoral SyRB for residential mortgages will thus not boost the resilience of the banks with the largest corporate exposures, whose risk of losses is most pronounced when consumption is tightened.

Chart 3. Credit losses as a share of sectoral exposure. 1986-2022. Percent



Source: Norges Bank

*Calculating the effects of a change to a sectoral systemic risk buffer for Norwegian banks*

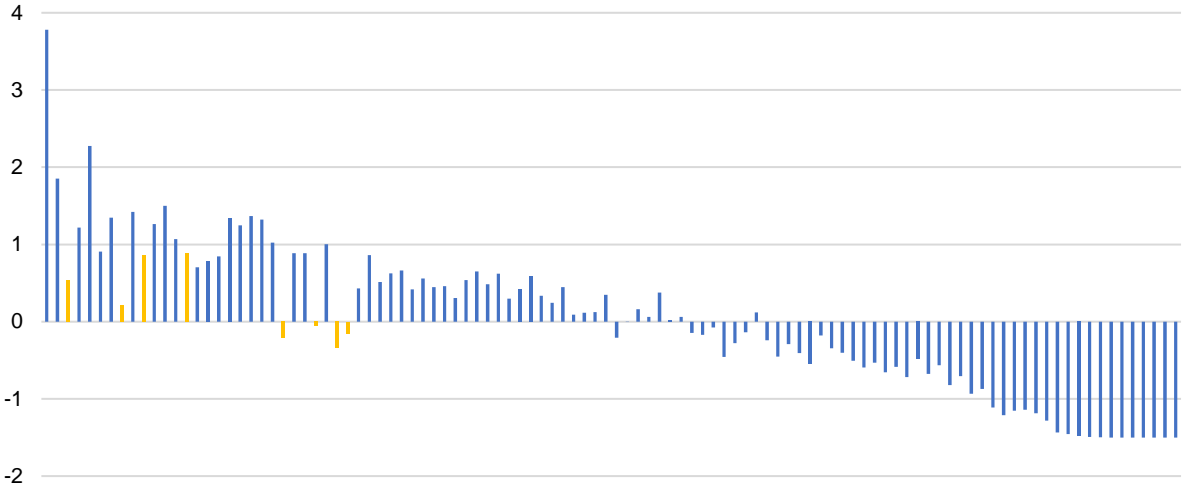
Norges Bank has assessed in further detail a sectoral SyRB for CRE exposures. A change has been examined where the general capital requirement is reduced from 4.5 to 3 percent, while a sectoral SyRB for CRE exposures of 10.7 percent is introduced. Overall, this results in unchanged capital adequacy in the banking sector prior to and after the change.<sup>4</sup>

The calculations indicate that such a change would have relatively minor effects on CET1 capital ratios for most banks (Chart 4). Banks with the largest share of CRE exposures are subject to the highest increase, but the increase is generally less pronounced for banks using the internal ratings-based (IRB) approach (yellow bars in Chart 4) than for banks using the standardised approach (blue bars). This may be because IRB banks have lower average risk

<sup>4</sup> The sample comprises 106 banks, excludes foreign branches and does not take into account any adjustments in banks. The reduction of the general SyRB takes into account that the Norwegian SyRB does not apply to banks' foreign exposures. The sectoral SyRB is applied to CRE exposures. Unlike the general SyRB, the sectoral SyRB is not applied to operational or market risks.

weights on CRE exposures than banks using the standardised approach. In addition, the effects may partly reflect different shares of exposures to other sectors with other risk weights and different market and operational risks as a share of total risk-weighted assets. However, the effects do not have a clear relationship with the size of the bank. Banks without CRE exposures, such as consumer credit banks, would benefit from a sectoral SyRB.

*Chart 4. Change in CET 1 capital ratios for Norwegian banks given a reduction of the general SyRB from 4.5 to 3 percent and the introduction of a sectoral SyRB of 10.7 percent for CRE exposures. Bars represent individual banks and are ordered based on CRE exposures as a share of individual banks' total lending. Percent*



Sources: Finanstilsynet and Norges Bank

*Not appropriate to introduce a sectoral SyRB in Norway*

A sectoral SyRB may induce banks with the highest CRE exposures to hold more underlying capital, but it is uncertain whether, in the event of a downturn in the future, CRE exposures would be the largest source of banks' losses, even if this has been the case historically. Credit losses may also be substantial in other sectors, such as real estate development and sectors especially vulnerable to climate transition. During the banking crisis, banks' losses were high in a number of sectors at the same time (Chart 3).

Calculations further indicate that for most banks, a sectoral SyRB for CRE exposures has little effect on CET 1 capital requirements. A substantial cost of such a change is that it complicates the regulations and provides scope for circumvention. Exposure subsets for a sectoral SyRB must probably be based on industry codes and/or whether the exposure is secured by property. Many firms operate within a number of different sectors. Industry codes are based on firms' main business line, and firms themselves report the industry code. This could provide scope for circumvention, particularly for groups operating within more than one sector. It also needs to be assessed whether property development and professional residential leasing should be included. If all loans secured by commercial property are included, the buffer would also apply to some firms that own their own premises within other sectors, such as manufacturing and retail trade. This could lead to less collateral pledged against loans. At the same time, some CRE loans carrying the highest credit risk might have already been extended without collateral and thus are not included. Collateral-based exposure subsets could also lead banks to secure more collateral in other ways than registered collateral on real property.

A sectoral SyRB would likely also contribute to the transfer of some CRE firms' financing from banks to the bond market. Banks would likely need to raise their CRE lending rates to maintain their return on equity, which could contribute to some reduction in bank debt and higher bond debt. A transfer of some of the credit risk from banks to the bond market could be beneficial for financial stability. On the other hand, bond debt could be a less stable source of financing than bank debt in downturns, which could increase the risk of fire sales of commercial properties and thereby result in higher bank losses. Higher financing costs for CRE firms could be challenging in today's situation where lending rates have risen sharply and reduced CRE firms' profitability and equity ratios.

Reciprocity by other countries is crucial for ensuring a well-functioning SyRB. This would be particularly crucial for a sectoral SyRB for CRE exposures because approximately 40 percent of banks' total CRE lending is extended by branches of foreign banks.

Norges Bank's overall assessment is that it is not appropriate to replace all or parts of the general SyRB with a sectoral SyRB for CRE exposures.

### **3. A brief assessment of a sectoral SyRB against climate risk**

In the coming years, global temperatures are expected to rise. At the same time, Norway has a target of net zero emissions by 2050. As a result, many firms could face higher costs, at the same time as productivity growth may prove to be periodically weak.

Climate stress tests, which focus on the adverse effects of climate transition, show that the risk of losses may increase substantially in some sectors. Emissions are very unevenly distributed. Shipping and oil and gas extraction alone account for about half of total emissions from Norwegian economic activity. According to estimates made by Menon on behalf of Norges Bank of emissions in firms' value chains, sectors that themselves produce substantial emissions generally also use carbon-intensive products in their production and they also often sell carbon-intensive products that are also used in carbon-intensive industries. Norges Bank has reason to believe that transport, process industry, extraction, mining and quarrying are particularly exposed.

High-emission sectors may be vulnerable to climate change and rapid changes in climate policy. Costs related to emission taxes and energy efficiency improvements, and expenses related to damage caused by changes in weather and climate, are expected to increase. Higher costs will have a negative impact on firms' operating margins, which could push up losses and reduce banks' lending capacity. At the same time, investment needs related to climate transition may increase.

Norges Bank has not assessed in further detail the design of a sectoral SyRB related to climate risk, but many of the same assessments that apply to a sectoral SyRB for CRE exposures would apply. Delimitation and scope for circumvention are likely even more difficult when designing a buffer against climate risk, as is determining exposure subsets. It may also be difficult to justify a sectoral SyRB based on sectors, for example if some carbon-intensive firms in other sectors are not included. Norges Bank's assessment is that such vulnerabilities are best addressed with a general SyRB.