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Questioni di Economia e Finanza

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by activating a systemic risk buffer

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INCREASING MACROPRUDENTIAL SPACE IN ITALY
BY ACTIVATING A SYSTEMIC RISK BUFFER

by Gennaro Catapano*, Leonardo del Vecchio*, Maddalena Galardo*,
Giulio Guerra** and Ilaria Petrarca**

Abstract

This paper studies how to increase macroprudential buffers that can be released in Italy to counter adverse shocks affecting the banking system (i.e. the macroprudential space) by activating a dedicated capital buffer. As required by European and Italian regulations, the Bank of Italy, as the designated macroprudential authority for the Italian banking sector, can activate the systemic risk buffer (SyRB) to prevent any systemic, cyclical or structural risk not already addressed by other prudential instruments. The paper analyses the structural risks in the Italian banking system and presents analyses conducted using two complementary approaches to identify the appropriate level for the SyRB and the best ways to introduce it. The first approach, based on the study of bank losses observed from 2006 to 2022, suggests that a macroprudential buffer of at least 1 per cent of domestic credit and counterparty risk-weighted assets would be needed to absorb the losses not already covered by other micro- or macroprudential requirements. The second approach identifies the appropriate buffer level through a cost-benefit analysis, estimating the cost of introducing the buffer, in terms of lower economic growth, and comparing it with the benefits of releasing the buffer when a shock hits the banking system. This second analysis indicates that the net benefits (i.e. the difference between benefits and costs) associated with activating the SyRB would be maximized for buffer values between 1 and 2 per cent. The impact analysis also shows that the introduction of a SyRB of 1 per cent would only marginally reduce the free capital currently available to the banking system.

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1. Introduction and conclusion

During the Covid-19 crisis, the Italian banking system proved to be resilient and was able to perform its core functions, also thanks to the support provided by the extraordinary fiscal, monetary and prudential measures implemented. In Europe, for the first time, many macroprudential authorities actively contributed to macroeconomic stabilisation with measures to support credit supply and limit the impact of the shock on economic activity. In this sense, the pandemic was a test of the effectiveness of macroprudential policy in mitigating the impact of the recession on credit supply and banking system stability. Italian banks faced with the pandemic without a capital buffer built to cope with shocks independent of the financial cycle and readily releasable by the macroprudential authority.[1] The buffer structure defined by the Basel Committee on Banking Supervision (BCBS) after the experience of the global financial crisis provides for the countercyclical capital buffer (CCyB) as the only releasable buffer, designed to address the cyclical risks associated with excessive credit growth. In addition to the CCyB, the European regulation also envisages the systemic risk buffer, which can be used to address macroprudential risks that are not already covered by other prudential instruments.

In Italy, since the introduction of the CCyB in 2015, the financial cycle has remained weak, so the CCyB has always been set at zero, while the SyRB was introduced in the Bank of Italy's macroprudential toolkit in 2022. Therefore, at the onset of the pandemic, the Italian banking system had no macroprudential reserves to support credit. This drawback was common to many macroprudential authorities: only eight of the 27 member countries of the Basel Committee on Banking Supervision (BCBS) had activated or announced a CCyB greater than zero before the pandemic.[2] Seven of these countries released the CCyB (fully or partially) in response to the Covid-19 shock. As noted in a recent BCBS report (BCBS, 2022a), the releases occurred even though the shock was unrelated to previous excessive credit growth and only a few countries referred to expected future credit market growth. In Europe, where the SyRB was available to macroprudential authorities in addition to the CCyB, four countries lessened this requirement when the Covid-19 shock hit.[3]

More generally, recent events have shown that adverse shocks (such as pandemics and wars, but also cyber-attacks or climate disasters) can affect the banking system. Although they are unrelated to the financial cycle, they are likely to cause a deterioration in banks' balance sheets, triggering or exacerbating a financial crisis. The impact would be more severe in an economy such as the Italian one, which is heavily dependent on bank financing. When such exogenous shocks hit, the availability of releasable capital buffers can enhance financial system resilience by better enabling banks to absorb losses while maintaining the provision of key financial services to the real economy, in line with the objectives of the capital buffer framework. Therefore, having releasable macroprudential buffers available could be beneficial to address shocks that may occur at any stage of the cycle. Indeed, had a SyRB been in place in Italy before the pandemic, its prompt release could have contributed to support the resilience of the system, maintain credit flow to the economy, and lessen the contingent costs of central bank and government interventions.

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[1] When the buffer is released, it falls outside the combined buffer requirement, increasing the capital available to banks above the limit of the Maximum Distributable Amount, which imposes restrictions on dividend distributions and coupon payments on subordinated instruments, as well as on the variable component of employee compensation.

[2] Belgium, France, Germany, Hong Kong, Luxemburg, Sweden, Switzerland and the United Kingdom.

[3] In Netherlands the buffer was reduced for some banks, in Finland and Estonia it was fully released, and in Ireland its introduction was postponed.

Since the aftermath of the pandemic, many macroprudential authorities have acted to increase buffers that can be promptly released in the event of sudden shocks, including those unrelated to the credit cycle (Bonato and Molinari 2024). In September 2022, the European Systemic Risk Board (ESRB) issued a Warning on vulnerabilities in the EU financial system (ESRB, 2022), endorsed by a statement of the European Central Bank (ECB), supporting the increase of macroprudential buffers in countries where the existing capital headroom,[4] coupled with the ability for banks to retain profits, would mitigate the risk of procyclicality (ECB, 2022). The Basel Committee on Banking Supervision also published a newsletter to support the use of the CCyB or other macroprudential tools, where available, to generate sufficient resources for banks to absorb unpredictable shocks (BCBS, 2022b).

According to the Bank of Italy's regulation, which fully implements the provisions of the CRDV[5], the SyRB is a very flexible tool that can be used to address any macroprudential risk, cyclical or structural, general or sectoral, that is not already addressed by other buffer requirements, such as the capital conservation buffer (CCoB), the CCyB, the buffer for the other systemically important institution (OSII) and the global systemically important institution (GSII), or other measures under the Capital Requirements Regulation (CRR).

In this note we discuss the use of a SyRB, applied to credit and counterparty risk-weighted exposures to Italian residents.

Based on an analysis of the historical losses of the Italian banking system, the level of the SyRB needed to generate sufficient resources to cope with adverse systemic events would be at least 1 per cent. Moreover, an analysis of the costs and benefits for the real economy measured in terms of GDP growth would suggest the introduction of a SyRB between 1 and 2 per cent, following a gradual strategy that, after the immediate application of a buffer of 0.5 per cent, would provide for its increase at intervals of 50 basis points each year.

The paper is structured as follows. It first analyses the case for a macroprudential buffer in the current macroeconomic and financial environment (Section 2). It then assesses the Italian banking sector's exposure to structural risks (Section 3) and presents two analyses to support the identification of the appropriate level of the buffer (Section 4). Finally, it assesses the impact of the buffer on the banking system and the real economy (Section 5).

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[4] Capital not constrained by regulatory requirements.
[5] Directive 2019/878/EU of the European Parliament and of the Council of 20 May 2019 that modifies Directive 2013/36/EU.
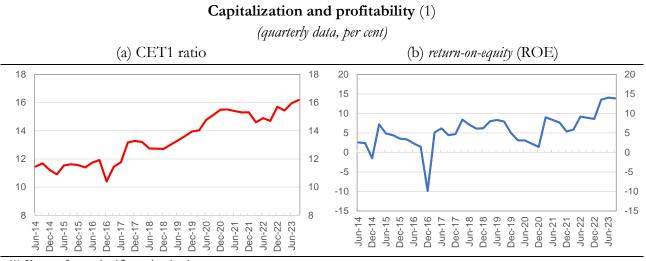
2. Building-up the buffer

While it is crucial to have buffers that can be promptly released in the event of a crisis in order to foster the banking system's ability to support the real economy, it is equally important to analyse the state of the system and the economic outlook in order to limit the possible adverse effects of increased requirements.

The establishment of a capital buffer for macro-prudential purposes in the current circumstances, i.e. with expectations of economic growth and a banking system that is generally well capitalised and soundly profitable, makes it possible to preserve the resilience of the system by limiting possible pro-cyclical effects.

Banks operating in Italy have relatively high capital ratios, higher than those observed in the pre-pandemic period (Figure 2.1.a). The common equity tier 1 (CET1), above the microprudential and macroprudential requirements already in place, amounted to about EUR 47 billion as of September 2023, more than 6 times credit and counterparty risk-weighted exposures to residents.

Figure 2.1

Capitalization and profitability (1)

(quarterly data, per cent)

(a) CET1 ratio   (b) *return-on-equity* (ROE)

(1) Data refer to significant institutions.

The profitability of Italian banks is at its highest level in the last ten years (Figure 2.1.b) and would remain strong in the medium term. Profits reached around EUR 32 bn in 2023 and are expected to remain at this level in the current year.

These capitalization and profitability conditions make the current situation particularly suitable for building up macroprudential buffers. Almost all intermediaries are well capitalized beyond what would be required for a new buffer and could also use their expected profitability to meet the new requirement without having to raise new capital on the market.

3. Assessing structural risks in Italy

There are no immediate risks to financial stability and the Italian banking system has strengthened considerably in recent years. However, the most recent experience and the uncertainty associated with geopolitical tensions arising from the ongoing war in Ukraine and exacerbated by the conflict in the Middle East call for a prudent assessment of the elements that would have the capacity to exacerbate the effects of adverse events that could occur in the future.

Certain structural features of the banking system can indeed amplify the impact of financial crises, but also of shocks originating outside the system. Particularly relevant factors are the size of the banking system, its degree of concentration and the intensity of its link with the real economy (ESRB 2017 and Banque de France 2020).

Indicators that measure structural systemic risks and are therefore useful for assessing the appropriateness of strengthening macroprudential safeguards have been analysed in order to assess whether there are specific features of the Italian banking system that could increase its vulnerability to the occurrence of adverse events. The indicators analysed fall into three homogeneous macro-categories of risks relating to (a) the propagation and amplification of shocks within the financial system; (b) structural characteristics of the banking sector; (c) exposure to the real economy.[6]
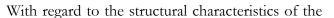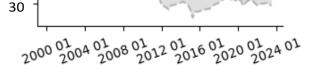
Figure 3.1

**Share of bank lending
to the domestic private sector**
(per cent)

The thicker blue line represents the Italian time-series. The black dashed line is the EU median. The shaded intervals represent the quantiles of the European cross-sectional distribution of the indicators: the darkest area represents the interquartile range; the intermediate grey are the 90 per cent range; the lighter grey the 95 per cent range.

With regard to the structural characteristics of the Italian banking sector, it should be noted that, compared with other EU countries, it accounts for a relatively high share of total credit to the domestic non-financial private sector (Figure 3.1.). This implies, on the one hand, that shocks to the banking sector can lead to a significant contraction of credit to the private sector and, on the other hand, that shocks to the non-financial private sector can lead to a significant deterioration of conditions in the domestic banking system.

4. Identifying the appropriate level of the SyRB

The SyRB can be used to address any macroprudential risk, cyclical or structural, not already addressed by other buffer requirements (i.e. CCyB, CCoB, G-SII and O-SII) or other measures under the CRR. The systemic risk addressed by the SyRB is therefore residual with respect to those addressed by the other macroprudential tools. Starting from this feature, we first present an approach to calibrate the SyRB that leverages the observed levels of historical bank losses that are not already addressed with other micro and macro prudential instruments. In other words, we explore what would have been the SyRB rate needed to help banks withstand past systemic tensions. In the second part of this section, we then take a

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[6] For a complete list of indicators, see Annex 11 of the ESRB publication (2017).

more forward looking approach. Since the SyRB can be released when judged necessary, we identify what would be the appropriate buffer requirement to mitigate the repercussions of future stresses on the real economy. To this aim, we perform a cost-benefit analysis comparing the cost of introducing a buffer to the benefit obtained by releasing it during a crisis.

4.1 Historical losses approach

Empirical model
To capture bank losses we use alternatively as dependent variable two measures of profitability, the return on equity (ROE) and the return on assets (ROA), and focus on the lower values of their distributions. We estimate the model by exploiting the quantile regression procedure.[7] This approach allows us to identify the effect of the covariates at different points of the dependent variable distribution. We use semiannual banks' balance sheet data from 2006 to 2022.

In the model, bank losses are explained by several factors. First, to take into account idiosyncratic bank characteristics that are relevant for microprudential decisions and the related prudential requirements and that the literature has found relevant for bank performance, we include measures of bank size, capital adequacy, credit risk, management efficiency and liquidity risk[8]. We also include a dummy variable valued if the bank is among the five largest Italian banks to proxy the O-SII status[9] and the Herfindahl index as a measure of market concentration. We use the credit-to-GDP gap as an indicator of the credit cycle and other variables representing macro-financial conditions to capture dynamics relevant for the activation of the CCyB. All the controls are lagged by one period to avoid endogeneity issues. Finally, we add year fixed effects. These coefficients account for time-specific effects that are common to all the banks but not captured by bank-specific factors and the credit cycle. Hence, these can be used to calibrate the capital buffer needed to absorb the losses not already covered by other buffers.

Results
To encompass different severities of stress events, we focus on values of profitability at the 15th, 10th and 5th percentile that are left unexplained by the variables of the model (and thus likely to be excluded in the calibration of prudential instruments already in place). We quantify the buffer that would have been needed to cover the 15th, 10th and 5th percentile of unexplained profitability realizations. In particular, realizations up to the 5th percentile of the distribution (corresponding to values below -14 per cent of ROE and -1.5 per cent of ROA) are considered severe stress, while medium and mild stress are those up to the 10th and the 15th percentile respectively (corresponding to values of ROE below -5 per cent and 0 per cent and of ROA below -0.48 per cent and 0 per cent).
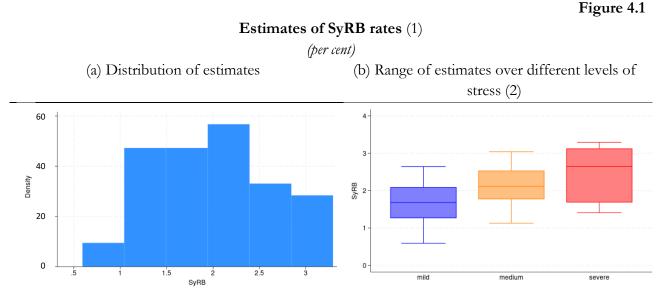
Since the calibration is based on the coefficients associated to the time fixed effects, the methodology allows us to estimate the buffer needed to cover losses (unexplained by model regressors) for each year of the sample. We focus on the estimated coefficients that are statistically significant at least at the 10-

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[7] Following the work of Adrian et al. (2019, 2021), the quantile regression method is widely used to identify "growth-to-risk." It is also used to identify "risk bank capital" (see Lang and Forletta, 2019, 2022).
[8] See, among others, Molyneux and Thornton, 1992; Kashyap and Stein, 1995, 2000; Albertazzi and Gambacorta 2009, Lee and Ngo, 2020.
[9] O-SIIs were first identified in 2016.

percentage level. Then, we transform these coefficients from unit of ROE or ROA into units of the regulatory capital ratio.[10]

Figure 4.1

Estimates of SyRB rates (1)

(per cent)

(a) Distribution of estimates · · · · · · · · (b) Range of estimates over different levels of stress (2)

(1) The graphs report the coefficients estimated using different specifications for both the models using ROE and ROA as dependent variable. – (2) Mild stress event refers to ROE or ROA realizations up to the 15th percentile of their distribution, while medium and severe stress are those up to the 10th and the 5th percentile respectively.

The estimates of the size of the buffer range from 0.6 percent of total RWA (in the year when the system-wide share of realized unexplained losses is the smallest) to 3.3 percent (in the year when it is the largest), with a median and mean of 2 percent (Figure 4.1.a). Since the SyRB can only be set in steps of 50 basis points, it is appropriate to approximate the estimates to the nearest multiple of 50 basis points to get a better idea of the rate of the buffer that would have been required[11]. Thus, the results suggest that SyRB ratios between about 1 and 3.5 percent would have been needed to cover the residual losses in the Italian banking system (figure 4.1.b).

4.2 Cost-benefit analysis

In this exercise, we take a forward-looking perspective to calibrate the SyRB. We identify the level of the buffer that would maximize the benefits associated with its release during a downturn while minimizing the costs borne by the economy after its introduction. The tightening and loosening of the macroprudential measure are assessed in terms of their impact on economic growth using a Bayesian Structural Vector Auto-Regressive (VAR) model calibrated to gauge the Gross Domestic Product (GDP) response function when subjected to exogenous shocks to banks' capital. Importantly, this model also has the capacity to represent the reciprocal influences between banks' balance sheets and the real economy through a feedback mechanism that accounts for the banking system's capital headroom. The response functions of the VAR model are broadly aligned to those of other academic results, such as Conti, Nobili and Signoretti (2023) and Ciril et al (2022).

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[10] The coefficients estimated by the model using the ROE as dependent variable are multiplied by the ratio of total equity to RWA. Those obtained from the specification explaining ROA are rescaled by the average risk-weights.

[11] Because the historical loss analyses are based on total RWA, the SyRB ratios estimated in this section are inherently lower than those that would be obtained for credit and counterparty risk-weighted exposures alone, which account for approximately 60 percent of total RWA in 2023.

Costs of the introduction of a SyRB

To assess the costs associated with a SyRB, we assume that banks keep their excess capital constant. This means that in order to meet the new capital ratio target, they must either deleverage (reduce their RWA) or increase their capital from profits. If banks' profits are positive, they can use them to finance some or all of the higher requirements. In the worst-case scenario of full deleveraging, the policy tightening is fully transmitted to banks' balance sheets, potentially leading to a credit crunch.

The difference between the RWA levels before and after the macroprudential measure serves as shock input to the VAR model. The cost associated with the SyRB is defined as the difference in one-year-ahead GDP growth with and without implementing the buffer. According to the VAR, the GDP response to the balance sheet becomes negligible after two years and peaks after one year.

The cost of implementing a SyRB increases non-linearly with its size (Table 4.1). Based on Q3 2023 data and assuming immediate implementation of the buffer (no phase-in), a SyRB of 100 basis points (bps) is estimated to have an impact on GDP growth of 15 bps, while doubling the requirement would increase the impact on GDP to 67 bps.

Table 4.1		
The costs of different SyRB rates		
(basis points)		
SyRB	Impact on GDP growth	
	no phase-in	phase-in
50	0	0
100	15	4
150	39	15
200	67	27
250	101	40

The cost of the implementation of a SyRB reduces when a phase-in strategy, involving the gradual increase of the requirement, is included. Modeling this strategy relies on assumptions on future banks' balance sheets and profitability. We formulate a phase-in strategy in which banks are required to raise 50 basis points of capital per year up until the complete implementation of the SyRB. For example, a SyRB of 50 basis points would be implemented immediately, while a SyRB of 150 basis points would be phased in (50 points immediately, another 50 points after one year, and the final 50 points after two years). In estimating the costs, we assume that banks' balance sheets are constant over the years. However, the amount of profits that banks are allowed to use each year to finance the new buffer decreases with the length of the phase in. Given that this strategy implements macroprudential measures over an extended period, banks have more time to react. Accordingly, the model forecasts that the cumulative impact on GDP growth over the phase-in period is significantly lower than the one observed with the immediate implementation.

Benefits of releasing a SyRB

To assess the effects of the release of the SyRB when a crisis materializes, we assume that the buffer is fully in place and focus on the benefits in terms of mitigation of the repercussions on the lending supply to households and firms. In analogy to what has been done in analyzing the costs, we assess the impact of the release on one-year-ahead GDP growth.

The benefits depend on both the size of the capital buffer released and the severity of the crisis, which is measured by the induced banks' capital depletion. We assume that the macroprudential authority immediately releases the buffer when the crisis materializes. We then assess how this loosening would boost economic growth, conditional on the severity of the crisis.

The benefits associated with the release of the SyRB increase with the severity of the crisis (Table 4.2): the tighter the capital available to banks, the more impactful the buffer release becomes in supporting economic growth. In general, our estimates suggest that a larger capital release has a larger absolute impact on growth. However, we observe diminishing returns.

						Table 4.2
	The benefits of releasing the SyRB at the onset of a crisis _(basis points)_					
	Crisis severities (CET1 depletion)					
SyRB	**100**	**200**	**300**	**400**	**500**	**Weighted average[1]**
	Impact on GDP growth					
50	20	31	45	60	73	25
100	36	56	83	114	144	44
150	47	75	113	160	210	59
200	54	88	137	199	271	68
250	58	96	153	230	322	74
(1) Values weighted by the probability level of observing a specific CET1 depletion, conditioned on the occurrence of a crisis representative of the trajectory of Italian economy in the period 1992 to 2023.						

To compare benefits to costs we compute the average benefit derived from releasing the buffer by weighting the benefit with the probability of observing the corresponding CET1 depletion (Table 4.2, last column).[12] In this case too increasing the capital buffer has diminishing returns: the first 50 bps of SyRB have a marginal benefit of 25 bps, while increasing the capital from 150 to 200 bps has a marginal benefit of only 9 bps.

Estimating the optimal level

We identify the optimal level of the SyRB as the one that maximizes the net benefits defined as the difference between the weighted benefits and the costs. Table 4.3 reports the estimated net benefit and shows that phasing-in the introduction of the buffer has a substantial effect. Without the phasing-in net benefits are maximized for a buffer of 100 basis points. The net benefits of a 150 basis point buffer are a little smaller and the gain vanishes for higher buffers. When we take into account a phase-in strategy for the introduction of the buffer, all SyRB levels from 50 to 250 have a net positive impact on GDP

		Table 4.3
Net benefit on GDP growth _(basis points)_		
	Net benefit	
SyRB	**no phase-in**	**phase-in**
50	25	25
100	29	40
150	20	44
200	1	41
250	-27	34

growth. Moving from a 50 to a 100 basis point buffer results in a significant increase in net benefits, which remain high for buffers between 100 and 200 basis points, peaking at 150 basis points.

5. Impact analysis

5.1 Impact assessment of introducing a SyRB for Italian banks

In this section, we carry out an impact assessment on increasing the combined buffer requirement (CBR) for the whole Italian banking system (138 banks or banking groups), through the activation of a SyRB

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[12] We compute the probability density function of observing a specific CET1 depletion, conditioned on the occurrence of a crisis representative of the trajectory of Italian economy in the period 1992 to 2023.
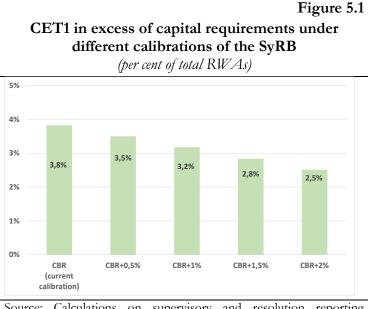
under four hypothetical calibrations: 50 bps; 100 bps; 150 bps; and 200 bps of domestic risk-weighted assets (RWAs) for counterparty and credit risks.

The impact assessment is based on September 2023 data[13] and takes into account some forward-looking items binding from 2024: i) recent changes in the calibration of the Other Systemically Important Institutions (O-SII) buffer;[14] ii) Pillar 2 requirement (P2R) and guidance (P2G) set in SREP 2023; iii) final MREL targets.[15]

The impact of the SyRB - in terms of additional amount of the CBR available to absorb losses, reduction of the excess capital or, in case, capital shortfall - is computed also taking into account the overlaps across different capital requirements (Cornacchia and Guerra, 2022), considering simultaneously the three EU capital regulatory frameworks: the risk-weighted capital (RW); the leverage ratio (LR); and the resolution framework (Minimum Requirement of Eligible Liabilities, MREL). The CBR stacks on top of the risk-weighted metrics: both RW and MREL-RW; it is not imposed on the leverage based requirements (LR or MREL-LR).

In case of shortfalls of CBR, we measure their size and identify the framework on which they occur: the RW (CBR-RW) or the MREL-RW (CBR-M). The information on the framework is important for two reasons: i) the breach of the CBR-RW involves the automatic application of restrictions on distributions (Maximum Distributable Amount restrictions, MDA-restrictions), while in case of breaching the CBR-M, the Resolution Authority can make use of some discretion, conceding a period of up to nine months before applying the M-MDA; ii) in case of the breach of the CBR-M, the bank can always fill the gap by issuing new MREL eligible liabilities other than CET1. On the contrary, in case of breach of the CBR-RW, filling in the shortfall through instruments other than CET1 may not be possible and must be evaluated on a case by case basis.[16]

As of September 2023, the weighted average CET1 ratio of the Italian banks is equal to 15.9 per cent of the RWAs, of which 3.8 p.p. are CET1 in excess (Figure 5.1). The reduction of the CET1 surplus is not proportional to the increase of the SyRB calibrations and leads to an excess of 2.5 per cent in case the new buffer is set at 2.5 per cent. If we consider a calibration of 1 per cent, the excess capital would be 3.2 per cent; in this case, releasing the SyRB would also convert almost the entire amount of this buffer (94 per cent) in excess capital. In the end, this impact analysis suggests that the activation of the SyRB would not be

Figure 5.1

CET1 in excess of capital requirements under different calibrations of the SyRB
(per cent of total RWAs)

Source: Calculations on supervisory and resolution reporting (September 2023).

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[13] The analysis combines supervisory (COREP) and resolution (MREL) reporting data.
[14] See Bank of Italy press release published on November 24th, 2023 (https://www.bancaditalia.it/media/comunicati/documenti/2023-02/cs-O-SII-20231121-en.pdf?language_id=1).
[15] We also consider the effect of the activation of the SyRB on the Market Confidence Charge (MCC) component of the MREL.
[16] This possibility depends on the amount of AT1/T2 instruments already issued: if the bank has already made use of the maximum eligible amount, the CBR-RW shortfall must be filled in with CET1.

affected by the overlaps (their effects would be negligible) and significantly increase the loss absorbing capacity of the Italian banking system.

5.2 Impact of releasing a SyRB during stress events

We now illustrate how the SyRB would provide economic support in the event of a crisis similar to those simulated in the two most recent stress test exercises: the 2023 EBA stress test[17] and the Vulnerability Analysis of the banking system conducted by the Bank of Italy at Q3 2022.[18] We assume that the buffer is fully in place when the crisis begins. Both exercises are characterized by a highly conservative approach, relying on extremely severe scenarios, as they anticipate CET1 ratio depletions significantly higher than those observed in reality. Therefore, the impacts of the release of the SyRB are higher than those reported in Chapter 4, as the latter are probability-weighted instead of scenario based.

The scenario of the Vulnerability Analysis was characterized by the international tensions which followed the Russian invasion of Ukraine. GDP was expected to fall by almost 2 per cent in 2023, while inflation was projected to rise in 2023 and then contract in 2024. According to our estimation, banks' CET1 ratios would fall on average by 210 basis points. Under these conditions, releasing a 100 basis point SyRB at the materialization of the scenario would support GDP growth by up to 0.6 percentage point, offsetting GDP depletion by more than one third (Table 5.1).

The scenario underlying the 2023 EBA stress test was more severe. It assumed a contraction in Italian GDP of 7.2 per cent, accompanied by an increase in inflation and the unemployment rate and drops in both residential and commercial real estate prices. According to the EBA calculation, under this scenario the CET1 ratio of Italian banks would decrease by 410 bps. Releasing a 100 bps SyRB at the materialization of the scenario would support growth by up to 1,2 percentage points, offsetting the drop in GDP by about one fifth.

						Table 5.1
Effects of releasing the SyRB on the GDP growth rate						
	Vulnerability analysis			EBA ST 2023		
SyRB (bps)	GDP (bps)	Delta GDP from SyRB release (bps)	Recovery (1) (per cent)	GDP (bps)	Delta GDP from SyRB release (bps)	Recovery (1) (per cent)
50		32	19		60	8
100		58	35		116	16
150	-168	78	46	-720	165	23
200		92	54		205	28
250		100	60		237	33
(1) Compensation for GDP contraction.						

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[17] See Bank of Italy (2023)

[18] Box 'Vulnerability analysis of the Italian banking system', Financial stability report, November 2022, Bank of Italy.

References

Adrian T., N. Boyarchenko and D. Giannone (2019), "Vulnerable growth", American Economic Review, 109(4), 1263-89.

Adams, P. A., Adrian, T., Boyarchenko, N., & Giannone, D. (2021). Forecasting macroeconomic risks. International Journal of Forecasting, 37(3), 1173-1191.

Albertazzi, U., & Gambacorta, L. (2009). Bank profitability and the business cycle. Journal of financial stability, 5(4), 393-409.

Banque de France (2020), "Systemic risk buffer: what would this instrument be used for?", January 2020.

Bank of Italy (2023). "Risultati dello stress test europeo del 2023", July. URL: https://www.bancaditalia.it/media/notizia/risultati-dello-stress-test-europeo-del-2023/

Bonato L. e Molinari M. (2024), "Il rafforzamento dei buffer macroprudenziali rilasciabili nei paesi dello Spazio economico europeo", Bank of Italy, Note di Stabilità finanziaria e vigilanza, N° 36, March 2024.

BCBS (2022a), "Buffer usability and cyclicality in the Basel framework", October 2022.

BCBS (2022b), "Newsletter on positive cycle-neutral countercyclical capital buffer rates", October 2022. URL: https://www.bis.org/publ/bcbs_nl30.htm

Conti, A. M., Nobili, A., & Signoretti, F. M. (2023). Bank capital requirement shocks: A narrative perspective. *European Economic Review*, *151*, 104254.

Cornacchia W. e G. Guerra (2022) " *Le sovrapposizioni (overlaps) tra requisiti minimi e riserve di capitale: la situazione delle banche italiane*", Note di stabilità finanziaria e vigilanza n. 30, July 2022.

Couaillier, C., Reghezza, A., d'Acri, C. R., & Scopelliti, A. (2022). How to release capital requirements during a pandemic? Evidence from euro area banks. *European Central Bank. Working Papers.*

ECB (2022), "Governing Council statement on macroprudential policies", November 2022. URL: https://www.ecb.europa.eu/pub/pdf/other/ecb.govcstatementonmacroprudentialpolicies112022~558 12a0ba0.en.pdf?16213c6047144eeaac19b600ab306f0e

ESRB (2017), "Final report on the use of structural macroprudential instruments in the EU", December 2017

ESRB (2022), "Warning on vulnerabilities in the Union financial system", September 2022. URL: https://www.esrb.europa.eu/pub/pdf/warnings/esrb.warning220929_on_vulnerabilities_union_financ ial_system~6ae5572939.en.pdf

Kashyap, A. K., & Stein, J. C. (1995). The impact of monetary policy on bank balance sheets. In Carnegie-rochester conference series on public policy (Vol. 42, pp. 151-195). North-Holland.

Kashyap, A. K., & Stein, J. C. (2000). What do a million observations on banks say about the transmission of monetary policy?. American Economic Review, 90(3), 407-428.

Lang, Jan Hannes, and Marco Forletta (2019). "Bank capital-at-risk: measuring the impact of cyclical systemic risk on future bank losses."

Lang, Jan Hannes, and Marco Forletta (2020). "Cyclical systemic risk and downside risks to bank profitability."

Le, T. D., & Ngo, T. (2020). The determinants of bank profitability: A cross-country analysis. Central Bank Review, 20(2), 65-73.

Molyneux, P., & Thornton, J. (1992). Determinants of European bank profitability: A note. Journal of banking & Finance, 16(6), 1173-1178.