ROYAL MONETARY AUTHORITY OF BHUTAN

Macro-prudential rules and regulations

COUNTERCYCLICAL CAPITAL BUFFER FOR BANKS

[Draft]
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Part 1. Introduction

1.1 Short title

1.1.1. Counter-cyclical capital buffer for banks

1.2 Authorization

1.2.1. The Royal Monetary Authority is authorized to issue these regulations under Section 9 (h) of the RMA Act 2010 in pursuance of the objectives stated in Sections 8 (a), 8(b), 8(d) and 8(e) of the RMA Act 2010 and Section 3 (a) of the Financial Services Act 2011.

1.3 Application

1.3.1. These guidelines and rules shall be applicable to all commercial banks and insurance companies (collectively 'banks') operating in Bhutan.

1.4 Definitions

1.4.1. Terms used within this regulation are as defined below, or as reasonably implied by contextual usage:

i. Tier 1 or Core Capital refers to the sum of the following components (as defined by the Prudential Regulations, 2002, Section 6.3.1.):
   • Paid-up capital (+)
   • General Reserves (Statutory Reserves) (+)
   • Share Premium Account (+)
   • Retained Earnings (Free Reserves) (+)
   • Loss for the current year (-)

ii. Capital Adequacy Ratio refers to the ratio of the bank's capital fund to its risk-weighted assets and risk weighted off-balance sheet items as defined under Section 6.4(a) of the Prudential Regulations, 2002.

iii. Core capital adequacy ratio refers to the ratio of the bank’s Tier 1 capital to its risk-weighted assets and risk weighted off-balance sheet items as defined under Section 6.4(b) of the Prudential Regulations, 2002.

iv. Capital adequacy requirements are the minimum requirements on the Capital Adequacy Ratio and the Core capital adequacy ratio, as set by RMA under Section 6.4. of the Prudential Regulations, 2002.

Part 2. Statement of policy

2.1 Purpose

2.1.1. This regulation intends to safeguard the financial sector from any adverse effects of business
cycle by way of building a buffer during upward phase of the cycle. This regulation shall ensure that banks have adequate capital to maintain the credit flow in the economy even during the downward phase while maintaining its solvency and minimum capital adequacy requirement.

2.2 **Scope**

2.2.1. These rules and regulations shall cover all loans and advances of a bank/insurance company.

2.3 **Responsibility**

2.3.1. It is the responsibility of the Board of Directors of Bank to ensure compliance with the provisions of this regulation or any directive with reference to this regulation that the RMA issues from time to time.

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**Part 3. Implementation and specific requirements**

3.1 **Limits and requirements**

3.1.1. Operationalisation of the counter-cyclical capital buffer shall be based on RMA's assessment of risks emanating from excessive credit growth.

a. The primary indicator for operationalization the counter-cyclical capital buffer shall be the gap between credit-to-GDP ratios from its trend value. In the event that this gap exceeds 500 basis points, the RMA shall consider implementing the buffer capital requirements. However, RMA shall come out with separate circulars should this gap requires revision.

b. The RMA may use other macro-financial indicators, as well as its judgment to supplement the information provided by the indicator of the credit-GDP gap from its trend value.

c. RMA shall communicate to Banks the indicators it is monitoring for this regulation from time to time.

3.1.2. Banks and insurance companies shall meet the additional capital requirement on account of the imposition of the counter-cyclical capital buffer, within the time-frame provided by the relevant RMA directive. The maximum time period allowed for compliance shall be 12 months from the date of issue of the directive.

3.1.3. Banks and insurance companies shall meet the additional capital requirement on account of the counter-cyclical buffer, with Tier 1 capital.

3.1.4. The additional Tier 1 capital maintained on account of this regulation shall be over and above any existing prudential capital requirements specified by the RMA on banks and insurance companies under its control.

3.1.5. The size of the capital buffer shall lie between zero and 2.5% of a bank/insurance company's risk-weighted assets.
3.1.6. The Countercyclical capital buffer requirement shall be activated by RMA when the monitored indicator crosses the threshold as shall be fixed by RMA from time to time.

3.1.7. The buffer shall be maintained in a separate account called the “counter-cyclical capital buffer”.

3.1.8. The RMA shall advise the banks through circulars to stop building countercyclical buffer when the value of the monitored indicators come below the threshold.

3.1.9. Banks shall utilize the buffer in a manner it deems appropriate.

3.1.10. The counter-cyclical capital buffer shall be maintained by each bank/insurance company and the bank/insurance company’s group as a whole.

3.1.11. This regulation shall be applied in conjunction or alternation with the regulation on sectoral capital requirements, as the RMA may deem fit.

3.1.12. The RMA shall switch off the counter-cyclical capital buffer when it deems that the need for building or maintaining capital buffers has ceased. It shall announce this decision by issuing a directive to all banks.

3.1.13. Banks shall calculate their counter-cyclical capital buffer requirement on a quarterly basis.

3.1.14. The RMA shall review and revise the provisions of this regulation from time to time, depending upon macro-economic and financial sector developments.

3.2 Reporting requirements

3.2.1. Each bank/insurance company shall submit returns regarding its counter-cyclical capital buffer and risk-weighted assets every quarter. These returns must be submitted before the end of the first month following that quarter.

**Part 4. Corrective measures**

4.1 Corrective measures and sanctions

4.1.1. Any bank that fails to maintain capital to the extent of the requirement imposed as per the relevant RMA directive, in relation to the provisions of this regulation, shall have restrictions imposed on its distribution of profits. These restrictions on distribution of profit will be over and above the restrictions imposed by the separate macro-prudential regulation called “Restrictions on distribution of profit”.

4.1.2. Banks will distribute dividends as per the table below:

<table>
<thead>
<tr>
<th>Tier 1 capital</th>
<th>Maximum Dividends Payable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Part 5. Effective date

5.1 Effective date

5.1.1. The regulation shall come into effect on ...

<table>
<thead>
<tr>
<th>Description</th>
<th>(as proportion of net profit eligible to be paid as dividend)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within second quartile of buffer</td>
<td>40%</td>
</tr>
<tr>
<td>Within third quartile of buffer</td>
<td>60%</td>
</tr>
<tr>
<td>Within fourth quartile of buffer</td>
<td>80%</td>
</tr>
<tr>
<td>Above the buffer requirement</td>
<td>100%</td>
</tr>
</tbody>
</table>
### Annexure.1 Reporting Requirements

<table>
<thead>
<tr>
<th>S. no.</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Sector wise outstanding loans for the quarter</td>
</tr>
<tr>
<td>2.</td>
<td>Sector-wise new loans made during the quarter</td>
</tr>
<tr>
<td>3.</td>
<td>Sector-wise and asset-wise average interest rates charged for new lending during the quarter</td>
</tr>
<tr>
<td>4.</td>
<td>Sector wise non performing loans</td>
</tr>
<tr>
<td>5.</td>
<td>LTV ratios on new loans to the residential mortgage sector</td>
</tr>
<tr>
<td>6.</td>
<td>LTV ratios on new loans to the automobile sector</td>
</tr>
<tr>
<td>7.</td>
<td>LTV ratios on new loans to the residential mortgage sector</td>
</tr>
<tr>
<td>8.</td>
<td>Distribution of loans to the sectors by loan size</td>
</tr>
<tr>
<td>9.</td>
<td>Term structure of overall lending rates</td>
</tr>
<tr>
<td>10.</td>
<td>Term structure of deposit rates</td>
</tr>
<tr>
<td>11.</td>
<td>Net outstanding loans to other banks at the end of the period</td>
</tr>
<tr>
<td>12.</td>
<td>Net outstanding loans to other insurance companies at the end of the period</td>
</tr>
<tr>
<td>13.</td>
<td>Net borrowing from other banks at the end of the period</td>
</tr>
<tr>
<td>14.</td>
<td>Net borrowing from other insurance companies at the end of the period</td>
</tr>
<tr>
<td>15.</td>
<td>Size of the countercyclical buffer and it’s utilization pattern post switching off the regulation</td>
</tr>
</tbody>
</table>
Annexure.2 Discussion Note

What is a Counter-cyclical capital buffer?

It is widely accepted that the flow of bank credit exhibits strong pro-cyclical tendencies. In particular, credit is likely to experience rapid growth during economic boom and deceleration during economic slowdown/stagnation. From a cross-country perspective, it is observed that excessive credit growth during the economic boom is generally associated with irrational exuberance and dilution of underwriting standards. The realistic risk position becomes evident with deterioration of asset quality during economic downswings. Consequent provisioning and capital adequacy requirements severely constrain bank balance sheets, diluting the potency of bank credit in stimulating or reviving the economy. The grim economic situation may cause more loans to turn non-performing and further constrain credit flow—thus adversely impacting financial stability. This phenomenon was also true of the recent global financial crisis, which has led many countries to incorporate macro-prudential elements in their policy toolkits. The counter-cyclical capital buffer (CCyB) is one such tool.

The concept of 'Counter Cyclical Capital Buffer' was suggested by Basel III as a macro-prudential tool. Basel III envisages the CCyB as a temporary layer of additional capital to be maintained over and above the existing prudential capital requirements during times of credit boom. When the risks materialize, i.e., when the regulator assesses that the economy is in a downturn phase, it may call for the buffer to be released. In this case, the buffer capital may be used by the bank to cover its unexpected loan losses, so that it is not strained to meet its minimum capital adequacy requirements during downturns. This decreases the likelihood of a disruption in credit flow which would otherwise further exacerbate the economic and financial downturn. Such a situation would occur if a credit crunch discourages economic activity and consequently impairs the ability of borrowers to repay loans. The additional capital requirement may also prevent buildup of excessive banking sector exposures (and risks) by making lending more expensive during credit booms. However, according to Basel, this should be the secondary objective of the buffer. The primary aim is to ensure a comfortable flow of credit. Notably, the requirement may be “turned off” when the regulator judges the risks to have receded.

Basel suggests that countries implement the buffer requirements between 2016 and 2019. However, Switzerland, an early bird in this respect, already has a sectoral counter-cyclical capital buffer equal to 2% of banks’ risk-weighted positions secured by residential property. The Bank of England has come up with a draft policy statement on its Financial Policy Committee’s powers to supplement capital requirements (by way of the CCyB and sectoral capital requirements). India has invited comments on a draft report on implementation of the counter-cyclical capital buffer.

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1 A global regulatory framework for more resilient banks and banking systems, Bank for International Settlement, June 2011.
The decision on the activation of the buffer is to be taken by the RMA on the basis of macro-economic and financial sector development in Bhutan “after using the best information available to gauge the build-up of system-wide risk”\(^2\). This information could be forthcoming through continuous monitoring of credit flow in the system. Basel in particular, recommends the use of the gap between the credit-GDP ratio and its trend value. If this gap is less than 2%, there is no requirement for any buffer to be operational. If the gap is above 10%, then the maximum buffer equaling 2.5% of total risk weighted assets has to be maintained. A gap between 2 and 10% will require the size of the buffer to vary linearly between 0 and 2.5% of risk-weighted assets.

**What indicators should be used by Bhutan to operationalize the counter-cyclical capital buffer?**

In this section we look at possible indicators for the RMA to monitor in order to decide on the operationalization of the CCyB.

**Method-1: Credit-GDP Ratio**

Basel in its guidance document\(^3\) to countries enumerates the steps involved in using the credit-GDP gap as an indicator to signal the build-up of risk.

**Step1:** Credit-GDP Ratio\(= \frac{\text{credit}_t}{\text{GDP}_t \text{ nominal}}\),

Where Credit, is the broad measure of nominal credit to the private non financial sector in period t and

GDP, is the nominal GDP of the country in period t.

Data for both measures should ideally be of quarterly frequency.

**Step 2:** Calculate the trend of the GDP ratio (Any kind of statistical filter could be used such as Hodrick Prescott)

**Step 3:** Calculate the difference between the actual credit-GDP ratio and the trend value, henceforth “Gap”.

If Gap<5%, no buffer is required to be build up

If Gap>5%, building up of the buffer shall be operational. The maximum buffer limit is 2.5% which shall be operational when the gap is more than 10%. Between 5% to 10% gap, 100 basis point increase in gap, the additional buffer increment would be 0.5%.

There are certain considerations to be noted before implementing the same technique for Bhutan. First and foremost, quarterly data for GDP is not available in case of Bhutan. Moreover, even the annual data becomes available only with a considerable lag-for example as of February, 2014 GDP data is available up to 2012. It will constrain the ability of RMA to

\(^2\) Guidance for national authorities operating the countercyclical capital buffer, Basel Committee on Banking Supervision, December 2010.

\(^3\) Guidance for national authorities operating the counter-cyclical capital buffer, Basel Committee on Banking Supervision, December 2010.
operationalize CCyB due to unavailability of high frequency real side indicator. Another complication may arise due to revisions in data-if such revision is significant.

To check how well the credit-GDP gap indicator performs for, we took the GDP data as reported by the National Statistical Bureau between 1998 and 2012. Credit data was taken from the Monetary Survey, and the measure of credit taken was “private sector credit”. The reason for this is that public sector debt itself is likely to be low during good times and high during bad times, in line with the operation of fiscal policy\(^4\). The trend value of the Credit-GDP ratio was calculated using the HP filter. The actual credit to GDP ratio and its trend is shown below in Figure 1.

**Figure 1: Credit-GDP ratio and its HP trend**

![Credit-GDP ratio and its HP trend](image)

Source: PwC calculations

The graph shows one instance when actual credit-GDP ratio exceeded trend credit-GDP ratio by more than 6% which is above the Basel operational guidelines suggested threshold limit of 2%. The buffer size in the corresponding period would have been about 1.2%. However, the regulation above does not put any mechanistic binding requirement on the RMA to actually implement the buffer in this way.

A conceptual issue to note is that a high credit-GDP ratio may be a result of desirable financial deepening rather than excessive credit build-up. This is especially true for developing countries including Bhutan where 2010 saw the entry of three new entrants in the banking sector as well as an insurance company (that is allowed to lend). Hence the RMA may have a look at other supplementary indicators as well to make a decision. One such variable would be the credit to deposit ratio where the denominator (deposits) would increase simultaneously with credit, in the event of financial deepening.

**Method-2**

\(^4\) Guidance for national authorities operating the counter-cyclical capital buffer, Basel Committee on Banking Supervision, December 2010.
The credit deposit-ratio in isolation may not reflect the build-up of potential risk. It would likely change in deposit. This is because the absolute credit-deposit ratio at a point in time is likely to be affected by structural factors like CRR and SLR. In addition, credit-deposit ratio does not capture the velocity as it only shows a stock measure at the end of the year.

The incremental credit-deposit ratio on the other hand will be able to indicate the extent of credit created in response to a given change in deposits. It shows the momentum in credit-deposit ratio in year t vis-à-vis year t-1. Higher incremental credit-deposit ratio indicates risky lending.

The indicator to take a decision on activation of CCyB could be constructed as given below:

1. Calculate the credit-deposit ratio (Xt) and the incremental credit to deposit ratio (Yt) for each period t.
2. Calculate the three period moving maxima of X and Y respectively. Call it Max (Xt) and Max (Yt) respectively where,
   Max (Xt) = Max(Xt-2, Xt-1, Xt) and
   Max (Yt) = Max(Yt-2, Yt-1, Yt)
3. Calculate the average of Max(Xt) and Max(Yt) for all t (i.e., (Max (Xt)+Max(Yt))/2). Call this Zt. By taking the average of this two indicator, we capture the stock and flow phenomena.
4. Calculate the trend value of Zt using any time-series filter.

Any upward deviation from the trend value may represent a situation of credit growing at a faster rate, while a downward deviation represents the reverse. The same exercise is carried out for Bhutan using data between September-2005 to September-2013 (see, Figure 2). In the graph, Zt is the result of Step 3 above.

There were two episodes of high credit expansion as measured by the above indicators that is credit to deposit ratio and incremental credit to deposit ratio. One was between June-2009 to December 2009, the other between September-2011 to March 2012. Hence the RMA can use this as a secondary indicator to supplement its decision on the counter-cyclical capital buffer. There is no threshold defined for such indicators and RMA may use its discretion after studying the movement of these and other associated indicators.

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5 Counter cyclical capital buffer guidance for India, Gopinath and Choudhary, Reserve Bank of India, June 2012.
Countercyclical capital buffer for banks

Figure 2: Measure of Credit-Deposit and Incremental Credit Deposit Ratios in Bhutan

Source: PwC calculations

It is to be noted is that a decrease in the credit-GDP ratio may be apparent to the RMA only with a lag. This may be a serious issue, considering a delay in release of buffers (to contain financial and economic distress), may defeat the purpose of the counter-cyclical buffer. Hence in this respect, monitoring data that becomes available sooner assumes importance. Data on banking sector profitability, NPAs etc may be suitable for this purpose. Stress tests on the banking sector may also aid the RMA’s decision taking.

Other salient points

Overlap with sectoral capital requirements - The CCyB is said to be a crude instrument since it does not address the source of the build-up of risk. That is, the excess build up of credit may be due to lending to a particular sector. Yet, the CCyB imposes a blanket increase in capital for all exposures, thus failing to provide sharp incentives to banks to decrease lending to the specific sector. RMA’s current practice of assigning sector-specific risk weights and the macro-prudential regulation on sectoral capital requirements would be important in this respect. It would be advisable for the RMA to judge which sectors are responsible for the increase in credit, and then use either of these regulations to augment capital as well as prevent the risk build up. In the event that the RMA is unable to zero down on specific sectors, imposition of the general CCyB would be the logical step.

7 Countercyclical Capital Buffers as a macroprudential instrument, Riksbank Studies, December 2012.
In essence, the RMA must use the CCyB in conjunction with a sectoral approach.

*Communication of the buffer decision*-forms an important consideration in the Basel Guidance document on the CCyB. An explanation of why the buffer is being implemented is seen to be important in order to promote transparency. Moreover if banks have a clear understanding of the situation in which the buffer is to be applicable, they may be encouraged to take pre-emptive action of their own volition. The RMA could choose to periodically carry out an assessment of macro-financial conditions, publicly disclosing whether there is any possibility of a macro-prudential instrument being applied in the near future. The release of the Financial Stability Report may provide this opportunity.

When it actually chooses to operationalize the buffer, the RMA must intimate the banks of the same, well in advance. Basel recommends a time period of up to 12 months for banks to comply with any additional capital requirements.\(^8\)

Going forward, for better judgment of risk build-up, the RMA should consider strengthening its MIS. For example, quarterly collection of GDP data, qualitative surveys on quality of underwriting (on the lines of the Senior Loan Officer Survey in the US), an index of asset prices will go some way in revealing a more accurate picture of potential risks. The RMA would also likely gain from international lessons in policy implementation that will emerge as more and more countries employ macro-prudential policies.

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\(^8\) New Zealand and RBI have also endorsed this. See, *[A new macro-prudential policy framework for New Zealand-final policy position, Reserve Bank of New Zealand, May 2013]* and *[Report of the Internal Working Group on Implementation of the Counter-cyclical capital buffer (Draft), Reserve Bank of India, December 2013]*, respectively.