FEATURE ARTICLE

Implementing the Basel III Countercyclical Capital Buffer

by the Banking Policy Department

Abstract: The Basel Committee introduced the Countercyclical Capital Buffer (CCyB) after the global financial crisis to ensure that capital requirements for the banking sector take account of the macro-financial environment in which banks operate. The CCyB is proposed to be implemented in Hong Kong as part of the globally agreed Basel III banking regulatory reform. After providing an overview of the basic mechanics of this new policy tool, this article explains the "guided discretion" approach which the HKMA proposes to adopt in the decision-making process for determining the appropriate Hong Kong CCyB rate, including information and criteria the HKMA intends to consider in taking such decisions.

The origin of the CCyB

As the Basel Committee on Banking Supervision has observed, the procyclical amplification of shocks throughout the banking system, financial markets and the broader economy can be one of the most destabilising elements of a financial crisis. The losses incurred in the banking sector during a downturn, which has been preceded by a period of excess credit growth, can be extremely large. These losses can destabilise the banking sector, driving banks to deleverage and reducing the supply of credit, thus resulting in hardship for businesses and individuals, and effectively sparking a vicious circle: problems in the financial system contribute to a downturn in the real economy which in turn feeds back into the banking sector.

In an endeavour to address this adverse feedback loop, the Basel Committee developed a series of measures to allow the banking sector to serve as a "shock absorber", instead of as a transmitter or amplifier of risk to the financial system and the broader economy. One of these measures is the Basel III Countercyclical Capital Buffer.[1]

The objectives of the CCyB

The primary aim of the CCyB is to provide a measure of protection to the banking sector against the build-up of system-wide risk associated with periods of excessive aggregate credit growth. The CCyB seeks to achieve this by ensuring that individual banks, and the banking sector as a whole, accumulate additional capital during any observed "credit boom". The additional capital can be used ("released") to absorb losses or meet increased capital requirements when system-wide risk crystallises, credit risks increase more than expected, risk aversion heightens, and the financial system enters a phase of stress and contraction. This should, in turn, help maintain the flow of credit to businesses and individuals and thereby lessening the impact of the stress on the real economy after a period of exuberant credit growth.

[1] See Basel Committee, "Basel III: A global regulatory framework for more resilient banks and banking systems", issued by the Basel Committee in December 2010 and revised June 2011 ("Basel III document"), paras.18, 29 and 136.

As a secondary benefit, the CCyB may also tend to "lean against the wind" and mitigate the build-up of excessive exuberance in the credit cycle in the first place, potentially containing credit growth to some degree and may therefore help moderate swings in asset prices and the economy. However, this potential moderating effect is not the primary objective envisaged for the CCyB.

The CCyB as an extension of the capital conservation buffer

Basel III requires banks to hold an additional "layer" of Common Equity Tier 1 (CET1) capital as a capital conservation buffer (CB) on top of the minimum capital requirements. The CB is designed to ensure that banks build up capital buffers outside periods of stress. It can be drawn down as losses are incurred to avoid breach of minimum capital requirements. The CB, once fully phased in, will be at least 2.5% of a bank's total risk-weighted assets (RWA)[2]. The CCyB takes effect as an extension of the CB. As the CCyB would normally range between 0% and 2.5% depending on perception of systemic risk, the total CB as extended by the CCyB would normally vary between 2.5% and 5%.

The "normal" upper bounds of the CCyB is at 2.5% and that of the CB as extended by the CCyB at 5%. They are calibrated by the Basel Committee and are minimum benchmarks on which all Basel Committee members could agree. Previous crises however show that, when a financial boom turns to bust, banks' losses can easily exceed 5% of RWA. In addition, output and employment losses may be large and long-lasting when banks have to deleverage and reduce the supply of credit in order to meet the minimum capital requirements. For this reason, the Basel Committee allows national authorities to set CCyB rates at above 2.5%. Many jurisdictions (e.g. the EU, Singapore, New Zealand, and Norway) have indeed embraced this flexibility in their Basel III implementation.

[2] RWA, as the name suggests, are a bank's assets and off-balance sheet exposures weighted according to their perceived risk.

A bank's CET1 capital must first be used to meet all of its minimum capital requirements (including any Pillar 2 add-on), before the remainder can contribute to the extended buffer range. This is illustrated in the "capital stack" below, which assumes full phase-in of Basel III minimum capital ratios and buffers and that the bank is not designated as a G-SIB (Global Systemically Important Bank) or D-SIB (Domestic Systemically Important Bank) and hence is not subject to any additional Higher Loss Absorbency capital requirement:

Capital stack	
CCyB (0% to 2.5% of RWA)	Capital Conservation Buffer
Capital Conservation Buffer (2.5% of RWA)	
Pillar 2 CET1 capital ratio add-on (if any)	Minimum Capital Ratios
Minimum CET1 capital ratio (4.5% of RWA)	

The CB (whether or not extended by the CCyB) is not regarded as a "hard" minimum capital requirement. If a bank's CET1 capital ratio falls within the CB range (as extended by the CCyB when applicable), the consequence is that restrictions would be imposed on the bank's discretionary profit distributions. Breaching the minimum capital requirement would generally attract far more severe consequences.

The CCyB for banks with exposures in multiple jurisdictions

CCyB rates in different jurisdictions will be set by relevant local authorities by reference to local circumstances and may therefore vary across jurisdictions. As many banks have credit exposures not only in their home jurisdiction of incorporation but also in one or more overseas jurisdictions, the Basel Committee has adopted a weighted average approach to ensure that the CCyB rate applicable to each bank appropriately reflects the geographic mix of its credit risk exposures.

A bank's "bank-specific CCyB rate" is essentially the rate (expressed as a percentage of the bank's total RWA) by which the bank's CB is extended by the CCyB requirement applicable to it. A bank must determine its own bank-specific CCyB rate as the weighted average of the applicable jurisdictional CCyB rates[3], which cover jurisdictions (including its home jurisdiction) where the bank has private sector credit exposures, effective at the date when the determination is made.

The weight to be assigned to a given jurisdiction's applicable CCyB rate is the ratio of the bank's aggregate RWA for its private sector credit risk exposures (in both the bank's banking book and trading book) in that jurisdiction to the sum of such aggregate RWA across all jurisdictions in which the bank has private sector credit risk exposures.

A simplified example is that, if a bank's private sector credit exposures are divided between country A (70%) and country B (30%), and the applicable jurisdictional CCyB rates are 2% in country A and 1% in country B, then the bank-specific CCyB rate would be 2% X 70% + 1% X 30% = 1.7%. This bank would accordingly be required to hold additional CET1 capital equivalent to 1.7% of its total RWA in order to satisfy its bank-specific CCyB requirement.

Giving banks sufficient time to adjust to a CCyB rate increase

Since it will take time for banks to adjust their capital planning when faced with an increase in CCyB rates, the Basel Committee recommends that a notice period ("pre-announcement period") between the announcement of a decision to activate or increase a jurisdictional CCyB rate and its effective date should be given to banks. The pre-announcement period should not be longer than 12 months. A decrease in a jurisdictional CCyB rate is expected to become effective immediately upon announcement.

The Basel Committee also provides for a gradual phase-in schedule over a three-year period, according to which the CCyB rate would be capped under ordinary circumstances at 0.625% in 2016, with the cap rising by 0.625 percentage points each subsequent year until it reaches 2.5% on 1 January 2019. However, the Basel III standard provides flexibility for national authorities to accelerate the phase-in of the CB and the CCyB if their jurisdictions experience excessive credit growth during the transition period.

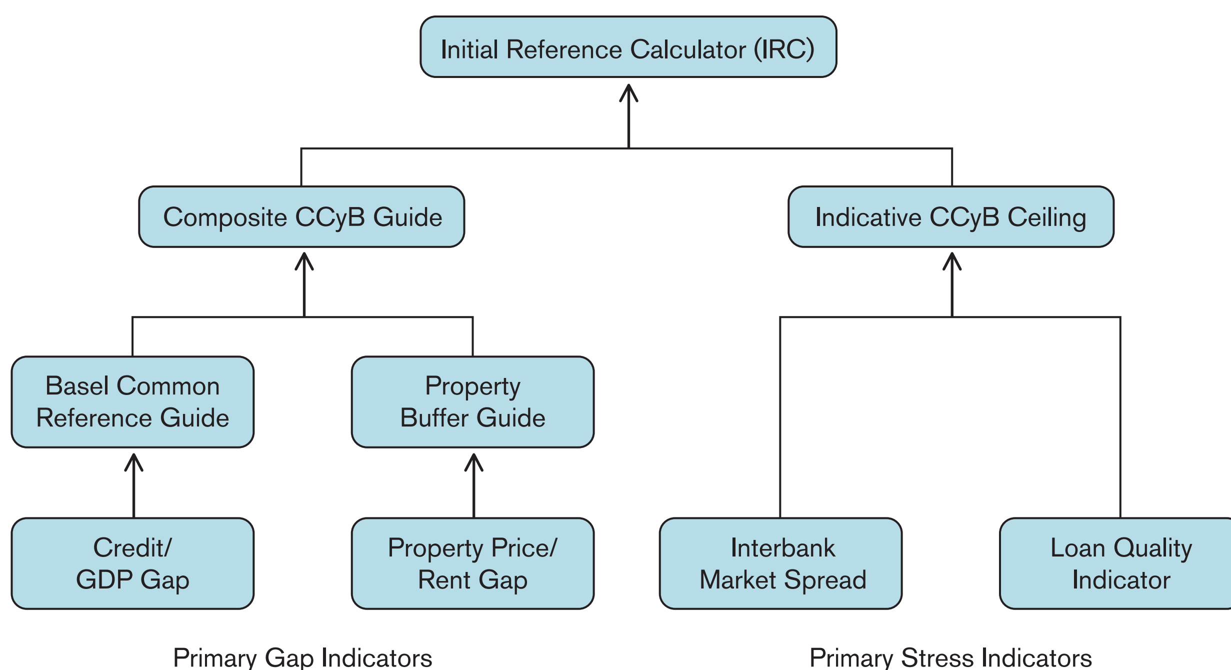
The HKMA's proposed approach to determining the Hong Kong CCyB rate

In line with the philosophy underpinning the Basel III standard in respect of the CCyB, the HKMA intends to activate (or increase the level of) the CCyB when the HKMA determines that a period of excessive credit growth in Hong Kong is leading to a build-up of system-wide risk in the financial system. Correspondingly, the CCyB ratio would be reduced (or completely released) when the HKMA determines that such system-wide risk has either receded (removing the original cause for imposition of the buffer), or has crystallised (such that any potential credit crunch may be exacerbated if the buffer requirement remains in place).

The HKMA proposes to adopt a "guided discretion" approach in determining the appropriate level of the Hong Kong jurisdictional CCyB rate and the timing of its activation, increase, decrease or release. The approach starts with an "Initial Reference Calculator" (IRC) that will be transparently calculated and made

[3] Under the Basel III standard of jurisdictional reciprocity, a home supervisory authority is normally expected to require banks under its jurisdiction to apply other jurisdictions' CCyB rates in respect of their private sector credit exposures to those jurisdictions. However, there are two exceptions to this. The first is that a home authority is not required to reciprocate in respect of the portion of a CCyB rate above 2.5% when an overseas jurisdiction sets a CCyB rate in excess of 2.5%. The second exception is that a home authority may require banks under its jurisdiction to apply a higher (but not lower) CCyB rate in respect of their private sector credit risk exposures in an overseas jurisdiction than that set by the relevant overseas authority.

CHART 1
The Initial Reference Calculator (IRC)



public (See Chart 1 for an illustration of the main inputs to the IRC).

The decision process then builds upon the IRC output by incorporating the analysis of information drawn from a broader set of "Comprehensive Reference Indicators" and other appropriate sources. The final policy decision will be taken on the basis of such informed judgment and will be publicly announced. The public announcement will include a justification if the decision departs from the guidance provided by the IRC in either a "tightening" or "loosening" direction.

While the IRC is intended to provide a degree of guidance to the HKMA and to the market, the HKMA intends to retain the discretion to diverge from the IRC if, in the HKMA's view, there is relatively strong evidence to support an alternative course of action in order to mitigate systemic risk or instability within the banking system in Hong Kong. In other words, discretion is proposed to be retained to cater for volatile, fast moving and hitherto unforeseen circumstances affecting the domestic economy, as well as for possibility of misrepresentation of important systemic risk developments by the quantitative indicators incorporated in the IRC.

Since the primary objective of the CCyB is to enhance resilience of the banking sector to system-wide risk associated with excessive aggregate credit growth, decisions on whether to activate, increase, decrease or release the Hong Kong jurisdictional CCyB rate will hinge on the assessment of:

(i) the extent to which any aggregate credit growth in Hong Kong may be deemed excessive (and thus suggest CCyB build-up);

(ii) the risks that may be building up across the banking system because of credit growth or other factors;

(iii) the fragility of the Hong Kong banking system vis à vis such risks; and

(iv) the degree to which an excessive credit contraction may be brewing or is likely to be imminent (and thus suggest CCyB release).

The HKMA's systemic risk "dashboard"

Making adequate and timely decisions on the CCyB (and indeed on the deployment of other macroprudential policy instruments) predicates on an ongoing monitoring and analysis of relevant information on the history and current state of, and future trends in, the banking system, the broader financial system, and the local and global economy insofar as they may be relevant to local systemic risk developments. The HKMA's proposed approach in this regard is to regularly monitor and analyse the following:

The "Basel Common Reference Guide": To provide a common starting point across jurisdictions, the Basel Committee expects national authorities to calculate, regularly disclose and consider in their CCyB decisions, a non-binding common reference guide based on a methodology that measures the "credit/GDP gap" (i.e. the extent to which the aggregate private sector credit/GDP ratio exceeds its long term trend). In line with the Basel Committee guidance, the HKMA proposes to calculate and publish the Basel Common Reference Guide for Hong Kong on a quarterly basis. However, as the Basel Committee has noted, although this guide can help signal the need for CCyB build-up, it is likely to be too slow for its release. The HKMA proposes to consider the Basel Common Reference Guide in its CCyB decisions but it would only be one of the multiple reference points.

The Initial Reference Calculator (IRC): The HKMA has developed for Hong Kong a methodology called the IRC, based on which the HKMA intends to calculate and publish, on a quarterly basis, an indicative CCyB rate guide, which will act as a starting point for its CCyB decision-making process.

The IRC will combine the credit/GDP gap (driving the Basel Common Reference Guide) with additional indicators including: the price-to-rent ratio in the local property market (driving the price/rent gap and the Property Buffer Guide as calculated by a similar approach to that for the credit/GDP gap and the Basel Common Reference Guide); a measure of interbank market spread; and a measure of loan quality in the banking sector.

By combining information on the degree of deviation of credit growth and property market valuation from their respective long-term trends, the IRC is designed to reflect the greater significance of the joint occurrence of large credit/GDP and property price/rent gaps in signalling the build-up of systemic risk locally as compared with the credit/GDP gap alone. Moreover, the joint presence of both "gaps" may also signal increasing systemic fragility, which would make the banking system more vulnerable to adverse shocks of any nature.

Improving upon the Basel Common Reference Guide, the IRC provides a guide for both the build-up of the CCyB and the partial or full release of the CCyB in the presence of early signs of banking system stress. This is achieved by the combination of two stress indicators relating to interbank market spread and loan quality, as significant and sustained spikes in spreads or substantial and rapid deterioration in loan quality may act as indicators of crystallisation of risk, signalling the need for buffer release.

A set of Comprehensive Reference Indicators: The HKMA also intends to monitor and analyse, on an ongoing basis, a broader set of indicators (for example, measures of leverage in the banking, corporate and household sectors, respectively) that can help the HKMA develop a more comprehensive view of systemic risk by covering risk factors that may not be adequately captured by the Basel Common Reference Guide and the IRC.

Other relevant information and analyses: Finally, the HKMA would propose to consider in its CCyB decisions any other information, be it quantitative or qualitative, that may come to light or be available at the relevant time and that may be relevant in the context of the HKMA's mandate of promoting the general stability and effectiveness of the banking system. Such information may be obtained through the HKMA's ongoing monitoring of events at the local, regional and global level that may carry implications for banking system risk in Hong Kong. It may also derive from focused studies or analyses of particular issues (including the assessment of potential improvements in the IRC inputs and methodology).

Deciding on the Hong Kong jurisdictional CCyB rate

Based on the analysis of available information (and as a prelude to any decision on the Hong Kong jurisdictional CCyB rate), the HKMA intends to first focus on whether the broad systemic picture – including not only the current situation but also foreseeable short- to medium-term trends – suggests that the appropriate macroprudential policy stance should be "neutral", "tightening" or "loosening", corresponding to the same, higher, or lower CCyB rate levels relative to the guide provided by the IRC. Given the quarterly calculation and publication of the Basel Common Reference Guide and the IRC, the HKMA would propose to review its macroprudential policy stance on at least a quarterly basis.

Once a macroprudential policy stance has been determined, the HKMA would intend to interpret the guide provided by the IRC in the light of the stance and consider and assess available policy options (including possible combinations of CCyB rate levels with other complementary or alternative macroprudential policy instruments designed to bolster the resilience of the banking sector). Before reaching a decision, the HKMA may also consult other parties as appropriate in order to arrive at an informed judgment based on all relevant information (including any supervisory or market intelligence to which the HKMA has access). As mentioned above, the public announcement of the decision would include a justification if there is any divergence from the guide provided by the IRC.