Occasional Report: Basel Gap

The Basel Gap

Highlights:

- ***The build-up of excessive credit is often seen as a harbinger of banking crises.***
- ***To preemptively gauge the build-up of excessive credit, the credit-to-GDP gap or Basel Gap along with other supplementary indicators, is used to ascertain the counter cyclical capital buffer by RBI for the banking system.***
- ***Even as the Basel gap seems to be closing in, the RBI has grown increasingly cautious about the unbridled growth of personal loans and retail credit and has taken several regulatory measures to curb the rise of consumer credit.***

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The central bank assiduously monitors the build-up of excessive credit in the economy. The credit-to-GDP gap also known as Basel Gap is the main indicator for ascertaining the extent of excessive credit in the economy and prescribing preventive measures such as the countercyclical capital buffer for banks and non-banking financial companies (NBFCs). The Basel Gap serves as an early warning indicator (EWI) for RBI, and other central banks which have adopted the Basel III risk reporting framework.

Credit booms and the central bank concerns: There is ample historical evidence that build-up of excessive credit often precedes banking and financial crises. The Global Financial crisis (2008) is a recent and prominent example. Hence, excessive credit build-up is a matter of grave concern for central banks. But how and when does credit become excessive? According to the International Monetary Fund (IMF), credit booms or excessive credit growth can occur due to three reasons i.e. financial deepening, normal cyclical upturns, and excessive cyclical movements ("credit booms"). There is no single or objective method to answer this. Hence, there are many approaches to assess the amount of excessive credit in an economy. All of them carry a degree of arbitrariness along with them. Some of the examples of indicators of excessive credit are:

(i) Broad credit – including credit from all sources i.e. bonds, and credit given to non-financial private sector is gauged in terms of:
   a. Y-o-y rate of growth
   b. Ratio of credit to GDP
   c. The deviations from credit to GDP ratio from its trend (The Basel Gap)
   d. Bank credit
   e. Global liquidity
   f. Debt service costs

(ii) Macroeconomic Indicators such as:
   a. Real GDP growth y-o-y
   b. Current account as a percentage of GDP
   c. M3, in terms of real growth rate and gap to trend
   d. Real Effective Exchange Rate (REER)

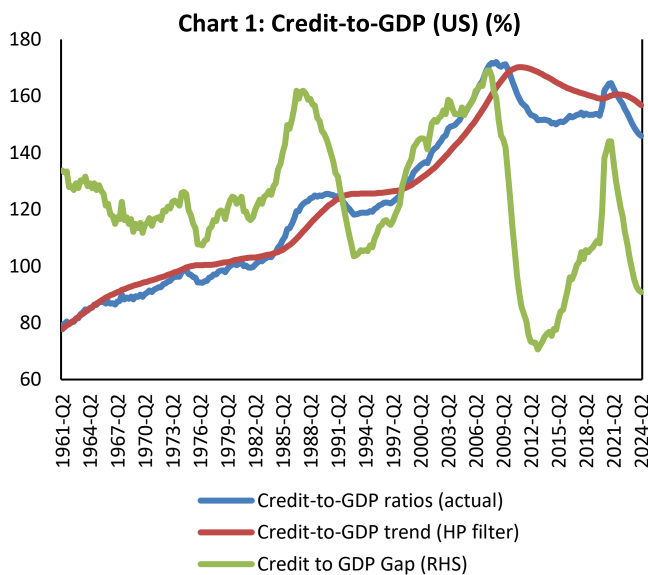
(i) Property Prices – House price growth

(ii) Market Based Indicators – 10-year, 3-month interest rates, equity prices growth deflated by CPI inflation.

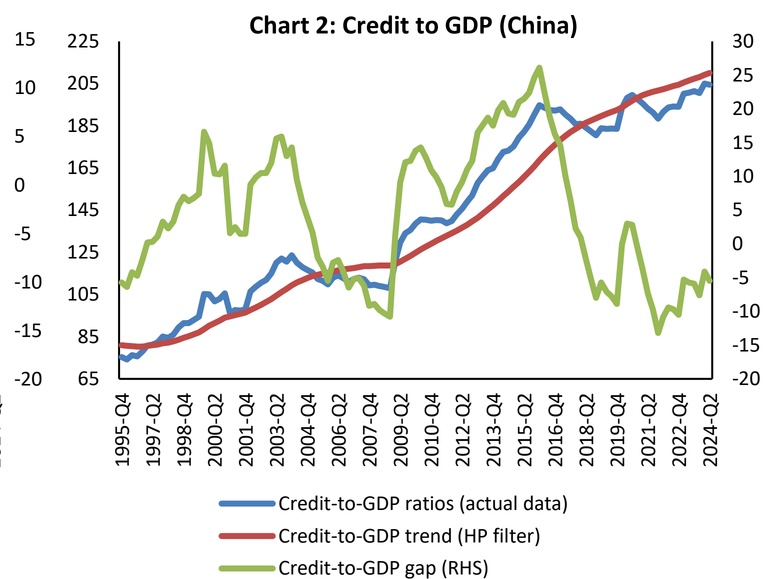
These indicators are measured against tolerances or thresholds to assess whether the growth in credit is excessive i.e. more than what is required for the current GDP growth rate. Research is divided on the performance of one particular indicator as the best, though the Basel Gap is said to outperform the rest of the indicators, despite its own set of shortcomings.

Total Credit and Bank Credit: Total or broad credit is defined as financing from all sources including domestic banks, other domestic financial corporations, non-financial corporations and non-residents. Bank credit includes credit extended by domestic banks to the private non-financial sector. Different jurisdictions use different definitions of credit. China uses the definition of its central bank i.e. total credit to the non-financial private sector. The US defines credit as per the US Fed's definition covering credit market debt outstanding, non-financial corporate business plus household and non-profit organisation sector.

In India the credit channel is dominated by the banking system. India uses International Monetary Funds-International Financial Statistics (IMF-IFS) definition of credit termed as claims on private sector. Claims on private sector include gross credit from financial system to individuals, enterprises, non-financial public entities not included under net domestic credit, and financial institutions not included elsewhere.



Source: BIS, STCI PD Research



Source: BIS, STCI PD Research

Credit-to-GDP - an effective EWI: This ratio signifies the amount of credit as a percentage of the nominal GDP, and usually a low score on this ratio would mean credit growth is lagging as compared to GDP growth - a ratio lower than 100 per cent indicating signs of slack in the economy. The converse is true when the ratio is above 100 per cent - it signifies the overheating of the economy as credit growth exceeds economic growth. This could give rise to asset price bubbles, especially in segments like housing and equity. Hence, an indicator designed on this relationship is used as an effective early warning indicator by policy makers.

Box 1: Computing the Basel Gap

There are 3 steps to calculate the Countercyclical Capital Buffer:

Step 1: Calculate the aggregate private sector credit-to-GDP ratio

The credit-to-GDP ratio in period t for each country is calculated as

$$RATIO_t = CREDIT_t / GDP_t \times 100\%$$

GDP_t is domestic GDP and $CREDIT_t$ is a broad measure of credit to the private, non-financial sector in period t.

Step 2: Calculate the credit-to-GDP gap (The gap between the ratio and its trend)

The credit-to-GDP gap (GAP) in period t for each country is calculated as the actual credit-to-GDP ratio minus its long-term trend (TREND):

$$GAP_t = RATIO_t - TREND_t$$

Step 3: Transform the credit-to-GDP gap into the guide buffer add-on

The size of the buffer add-on (VB_t) (in per cent of risk-weighted assets) is zero when GAP_t is below a certain threshold (L). It then increases with the GAP_t until the buffer reaches its maximum level (VB^{max}) when the GAP exceeds an upper threshold.

The Basel committee on banking supervision (BCBS) found that an adjustment factor based on L=2 and H=10 provides a reasonable and robust specification based on historical banking crises. This is subject to certain conditions like the usage of the smoothing parameter to ascertain the long-term trend, the length of the relevant credit and GDP data and the exact setting of L and H.

Source: BIS, Guidance for national authorities operating the counter cyclical buffer – December 2010

The Basel Gap: The credit-to-GDP gap is also termed as the Basel Gap, as it is a part of the BASEL III reporting matrix. It is the difference between the credit-to-GDP ratio and the long-term trend value of credit-to-GDP ratio at any point in time. It is a simple measure as it calculates the difference between the trend rate of the credit-to-GDP ratio with its actual readings to assess whether the economy has built up excessive credit. The RBI uses the Basel Gap as the main indicator for assessment along with other supplementary measures such as credit-deposit ratio, interest coverage ratio, and gross non-performing assets (GNPA).

The Basel Gap as a macroprudential tool: The Basel Committee on Banking Supervision recommends the use of the Basel Gap as the main indicator in setting the countercyclical capital buffer for banks. The Basel committee on banking supervision gives due thought to crisis times. It is necessary though not sufficient to solve the insolvency of a bank during crisis. The insolvency is taken care of by the minimum capital requirement and the capital conservation buffer is adequate for that purpose. Over and above that, the bank should also be able to lend smoothly without its solvency being questioned.

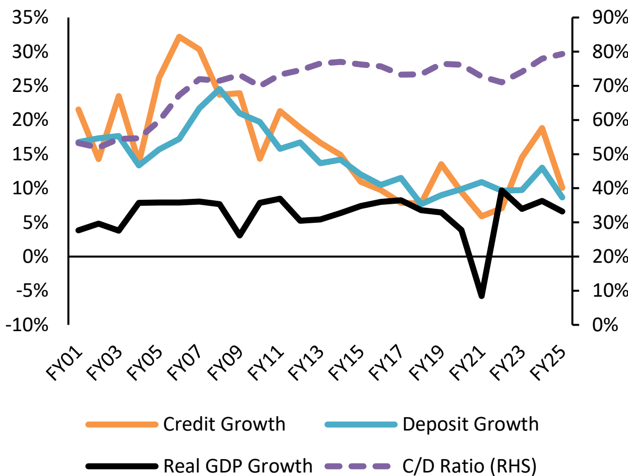
This is remedied by the countercyclical capital buffer which has to be ascertained using the Basel Gap as a measure of the level of excessive credit above trend. The counter cyclical capital buffer may also act as a credit decelerator even as the financial system is experiencing a buildup of excessive credit as it would increase the cost of credit, slowing down the demand for credit, when regulators are convinced that the stock of credit is in excess of the past benchmarks or thresholds.

Implementing the Basel Gap: The Basel committee recommends the usage of the Basel Gap along with other parameters as per the jurisdiction's own needs, and cautions the users of the shortcomings of the Basel Gap. The Basel gap might sometimes provide with an overestimated measure to compute the countercyclical capital buffer, which might prove detrimental to overall lending activity of the banking and non-banking system. The regulatory authorities have to be alert with their own judgment in place to decide on whether to impose the countercyclical buffer charge.

Credit cycle in India: The Indian banking system has seen an average credit growth of 17 per cent since FY2021-22, partially caused by the low base during the pandemic years of FY2019-20 to FY2020-21. The trend for non-food credit remained in the double digits post FY2020-21 up to Q2 FY2024-25. The major drivers of this robust credit growth were credit to services and consumer credit. Credit growth has declined to an average of 7.2 per cent since July 2024. The slowing of credit is in line with the lower than expected GDP print of 5.4 per cent as compared to the expected 6.5 per cent in the Q2 FY2024-25.

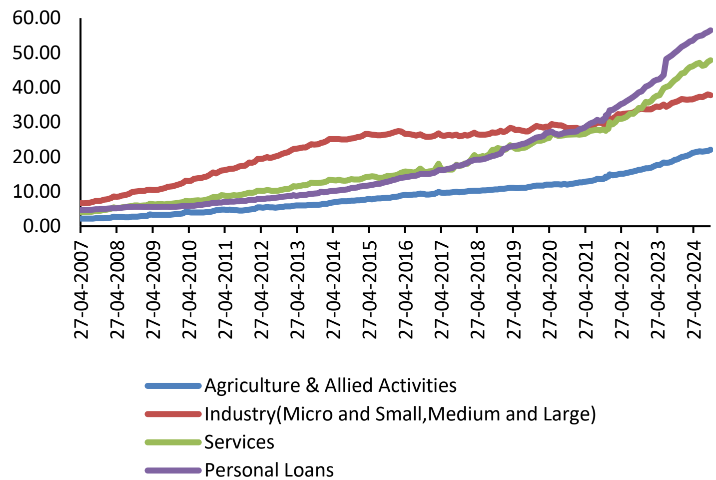
Credit-Deposit Wedge: Credit growth has outstripped deposit growth since FY2021-22, indicating the beginning of excessive credit build up. This can be associated with the fact that deposit growth has remained more or less stable including the pandemic years, while credit growth has a low base having reached as low as 4 per cent during the peak of the pandemic. The 4 per cent level of credit growth was breached only during the demonetisation exercise in FY2016-17.

Chart 3:Annual Credit, Deposit & GDP Growth (%)-India



Source: RBI, STCI PD Research

Chart 4: Sectoral Deployment of credit in India (₹ Lakh Crore)



Source: RBI, STCI PD Research

Allocation of Credit by Banks: The composition of credit and allocation by commerical banks has undergone significant changes over the last decade. In terms of growth, industrial credit lags personal loans by a wide margin, explaining the tepid growth in private investments post-pandemic.

This would lead to the oft made observation that general risk aversion for green field projects was guiding firms' decisions of new investments. A cohesive demand for pick-up in private investment has often been raised by the government, that had also cut corporate taxes by 20 per cent to encourage private investment in FY2019-20 with the effects less than expected. The change in the allocation of credit was also partially triggered by the implementation of Basel III capital regulations in India since April 2013, which prescribed risk based capital requirements.

The HDFC Bank & NBFC Merger impact: The merger of HDFC and HDFC bank that aggregated the huge housing credit of the NBFC-HDFC into HDFC Bank, increased gross bank credit by ₹ 6.16 Lakh Crore. Overall credit growth has also picked up as seen in the granular data of allocation of credit by banks.

Since HDFC was a deposit-taking Housing Finance Company(HFC), the effect of the merger was seen on deposits as well, but a more pronouned effect was seen on the allocation of credit by major sectors and especially on housing.

Personal loans segment has grown at 15 per cent since the merger in FY2023-24. Much of the robust growth in personal loans can be attributed to housing credit. Significant growth has taken place in personal loan category, even if the effect of the HDFC merger is to be segregagted from overall credit.

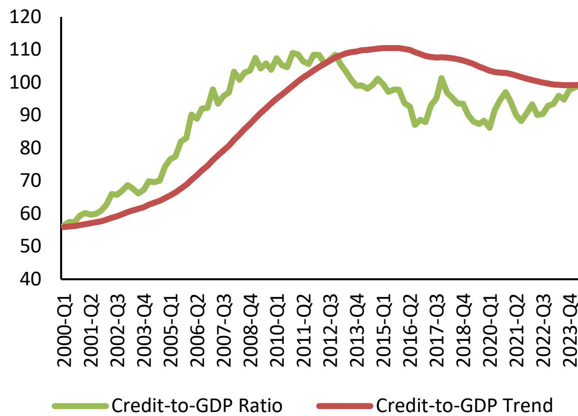
Central Bank's concerns: Recent RBI actions on various financial entities like payment banks and other NBFCs, in addition to warning the stakeholders about the rise in unsecured personal loans in particular and the rise in retail credit in general have been in the spotlight. Most of the regulatory oversight has been over financial entities dealing in some form of retail credit, directly or indirectly. This is due to the shift in allocation of credit by banks and other financial institutions like NBFCs increasingly to non-industrial credit, specifically, personal loans.

RBI takes precautionary measures: Monitoring the significant rise in consumer credit, RBI announced several restrictive measures in November 2023:

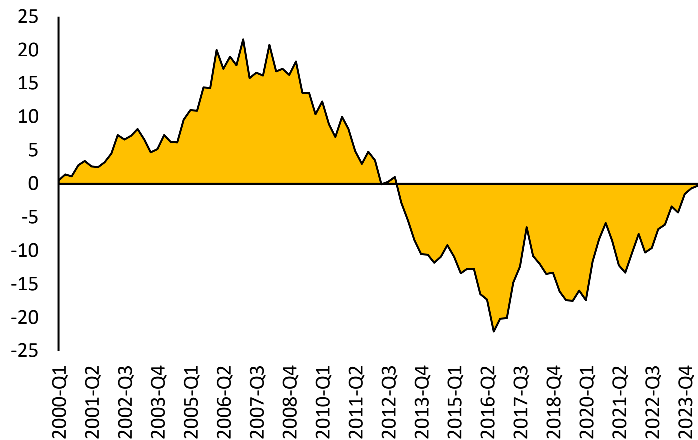
- Consumer credit exposure was assigned higher risk weights, for both banks and NBFCs, increasing the risk weights from 100 per cent to 125 per cent for all loans except housing loans.
- The type of loans under consumer credit, which attracted higher risk weights were: personal loans, education loans, vehicle loans and loans secured by gold and gold jewelry. For NBFCs, it also included exposure to self-help groups (SHGs) and microfinance.
- For credit card receivables, risk weights for banks was increased from 125 per cent to 150 per cent. Similarly, for NBFCs, risk weights were increased from 100 per cent to 125 per cent.

The Basel Gap in India: There were signs of excessive credit building up in the Indian economy. Notably, this had begun happening before the HDFC merger, and the recent regulatory measures of RBI on various lending agencies can be seen in this light. Chart 6 indicates that the Basel Gap was positive during much of the fast growth years of 2000-2012. Since 2013, even as policy repo rates declined, RBI's stringent asset quality reviews and the implementation of Basel III norms slowed credit growth.

Post 2013, the Basel Gap has remained negative. It can be seen that the credit gap is rising towards the post pandemic period, and the data indicates towards the beginning of FY2022-23 it has come close to the zero level or on the brink of crossing into positive territory signaling the beginning of the building up of excessive credit. This prompted the RBI to curb the credit activities by the November 2023 guidelines increasing the capital charge on consumer credit, though the countercyclical capital buffers remained untouched.



Source: BIS, STCI PD Research



Source: BIS, STCI PD Research

The combined effects of a high base of credit growth in the post pandemic years, coupled with stringent counter-cyclical measures by the central bank will eventually lead to slower expansion in credit, and in keeping the Basel Gap in the negative zone in the coming quarters. RBI has laid out detailed guidelines for banks under Indian jurisdiction in 2015, for the implementation of the countercyclical capital buffer:

Prescriptions for Banks in India:

- The countercyclical buffer may be maintained in the form of Common Equity Tier 1 (CET 1 capital or other fully loss absorbing capital only.
- The amount may vary from 0 to 2.5 per cent of total risk weighted assets (RWA) of the banks.
- The CCCB decision would normally be pre-announced with a lead time of 4 quarters. Banks could be asked in a shorter time frame in non-normal situations.
- Lower threshold (L) where CCCB shall be activated will be 3 percentage points, provided its relationship with Gross NPAs remains significant.

Box 2: Setting the bounds:

- Setting L= 2 means that when the GAP_t < 2%, the buffer add on is zero
- Setting H=10 means that when the GAP_t > 10 %, the buffer add-on is at its maximum.

Source: BIS

Box 3: Recent Notification on CCCB

The RBI notified banks on 23rd April 2024, that the counter cyclical capital buffer (CCCB), on review, will not be changed.

The countercyclical capital buffer is a regulatory measure taken by the central bank to avoid overheating in the credit channel.

Source: RBI

- The upper threshold (H) where the CCCB reaches its maximum shall be kept at 15 percentage points of the credit-to-GDP gap. At this level of the Basel Gap the CCCB shall remain at its maximum value of 2.5 per cent of RWA, till RBI signals its withdrawal.

Table 1: Individual bank minimum capital conservation ratios, assuming a requirement of 2.5% each of capital conservation buffer and CCCB	
Common Equity Tier 1 Ratio Bands	*Minimum Capital Conservation Ratios (as a % of earnings)*
>5.5% - 6.75%	*100%*
>6.75 -8%	*80%*
>8%-9.25%	*60%*
>9.25% -10.5%	*40%*
>10.5%	*0%*

- If the Basel gap is below 3 percentage points there will not be any CCCB requirement.
- All banks in India have to maintain CCCB on a solo as well as consolidated basis.
- Banks will be subject to restrictions on discretionary distributions (dividends, share buybacks, bonus payments) if they do not meet the requirement on countercyclical capital buffer, which is an extension of capital conservation buffer.
- First CET 1 band =Minimum CET 1 ratio + 25% of CCB +25% of applicable CCCB. Lower and upper values may undergo changes as RBI changes the capital/buffer requirements depending on the situation.

Conclusion: The Basel Gap is the main indicator for RBI is assessing the build-up of excessive credit in the economy. Although the build-up of credit was gaining traction, it was not anywhere near the prescribed higher bound of the gap i.e. H=15 of the Basel gap.

The current bounds of setting the countercyclical capital buffer prescribed by the central bank indicate that credit build-up is taking place in the economy even though the current Basel Gap is -0.3 percentage points as of Q1 FY2024-25 , which is still below level zero. Although the Basel gap is indicating signs of crossing the zero mark signaling the beginning of the excessive credit build up, as of now central bank seems assured that its stringent credit actions, especially on consumer credit will lead to a curbing of excessive credit and will not warrant any change in the counter cyclical capital buffer requirements.

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2. Guidance for national authorities operating the countercyclical capital buffer- Basel Committee on Banking Supervision – December 2010.
3. Identifying excessive credit growth and leverage – Lucia Alessi and Carsten Detken – Journal of Financial Stability 35 (2018) 215-225.

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