BANK FOR INTERNATIONAL SETTLEMENTS

Sustaining investment by leaning against booms and busts using Basel III

Presentation to the Reserve Bank of India and European Commission conference, "Investment and its Financing: What causes private investment to remain relatively low in Asia?" Mumbai, 16 December 2010

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*Views expressed are those of the author and not necessarily those of the BIS.

Agenda

- Monetary and financial stability as the central bank's contribution to sustained investment.
- Highlight the potential contribution of the macroprudential buffer under Basle III through counterfactual analysis:
  - Japan in 1980s ("Japan bubble")
  - Mexico in the 1990s ("tequila")
  - Spain in 2000s
  - UK in 2000s
  - US in 2000s
  - India in 2000s

Jobs of India's central bank

- Monetary policy: low and stable inflation.
- Financial stability: dampen procycality of financial system.
- Exchange rate management; reserve management.
- Debt management.
- Domestic financial market development.
- Examples of synergies:
  - Exchange rate management can help stabilise domestic inflation.
  - Debt management can lessen rollover risks that can lead to financial instability.
  - Monetary and financial stability policies can lean against credit and asset price boom.

Monetary stability and sustained investment

- Deflation is bad for corporate debtors with long-term fixed-rate debt and paying sticky wages.
- Rising inflation can conversely be good for profits if wages and interest payments adjust with a lag.
- But steady-state inflation is likely to be bad for firms:
  - Depreciation allowances are not inflation linked.
  - And investors are unlikely to perceive understatement of profits from the real pay-down of debts by firms (Modigliani-Cohn effect), leading to low equity market valuations (despite benefit of corporate income tax deduction from in effect debt repayment).
- And disinflation is bad for profits just like deflation.
- More generally, high and variable inflation may be bad for “animal spirits”.

Financial stability and sustained investment

- True, corporate investment often very strong when credit growth is rapid and asset prices rising.
  - Real estate collateral increases access to credit.
  - Banks, the guardians of credit, let down their guard.
- But subsequent financial crisis can, as emphasised in August 2010 by the Basel Committee's Long-term Economic Impact study lead to
  - Loss of output;
  - Permanently lower growth.
- Investment can remain weak in relation to corporate cash flows in a "balance sheet recession" as firms seek to pay down debt.
- Investment in Thailand, Malaysia and Indonesia has never recovered since the Asian Financial Crisis—an "investment dearth" rather than savings glut resulting in current account surpluses.

Basel III provides a new means to lean against rapid credit growth amid buoyant asset prices

- On top of
  - A new, tighter definition of capital, raising banks' loss absorption capacity.
  - A tougher definition of risk-weighted assets, thanks to the more restrictive treatment of the trading book, counterparty risk and securitisations.
  - A new, higher minimum capital requirement in terms of common equity, up from 2% to 4.5% of risk-weighted assets -- an effective rise from roughly 1% to 4.5% once deductions from eligible capital are taken into account.
- A "macroprudential overlay":
  - A capital conservation buffer, adding another 2.5%, and
  - A countercyclical buffer of up to 2.5%.

Basel III provides a new means to lean against booms: the countercyclical capital buffer

- Purely system-wide in its design.
- Based on the regularity that private-sector credit growth that is out of line with historical experience often ultimately results in loan losses.
- Thus the ratio of credit to GDP serves as a common reference for building up the buffer, which would be encouraged through restrictions on capital distributions (as with the conservation buffer).
- Authorities would then release the buffer based on incipient signs of strains, such as aggregate losses or tighter credit terms.
- This tool is based on considerable discretion: the common reference for building up the buffer would serve as a starting point from which to exercise judgement and the decision to release would refer only to some general guidelines.

What can be expected with a countercyclical capital buffer?

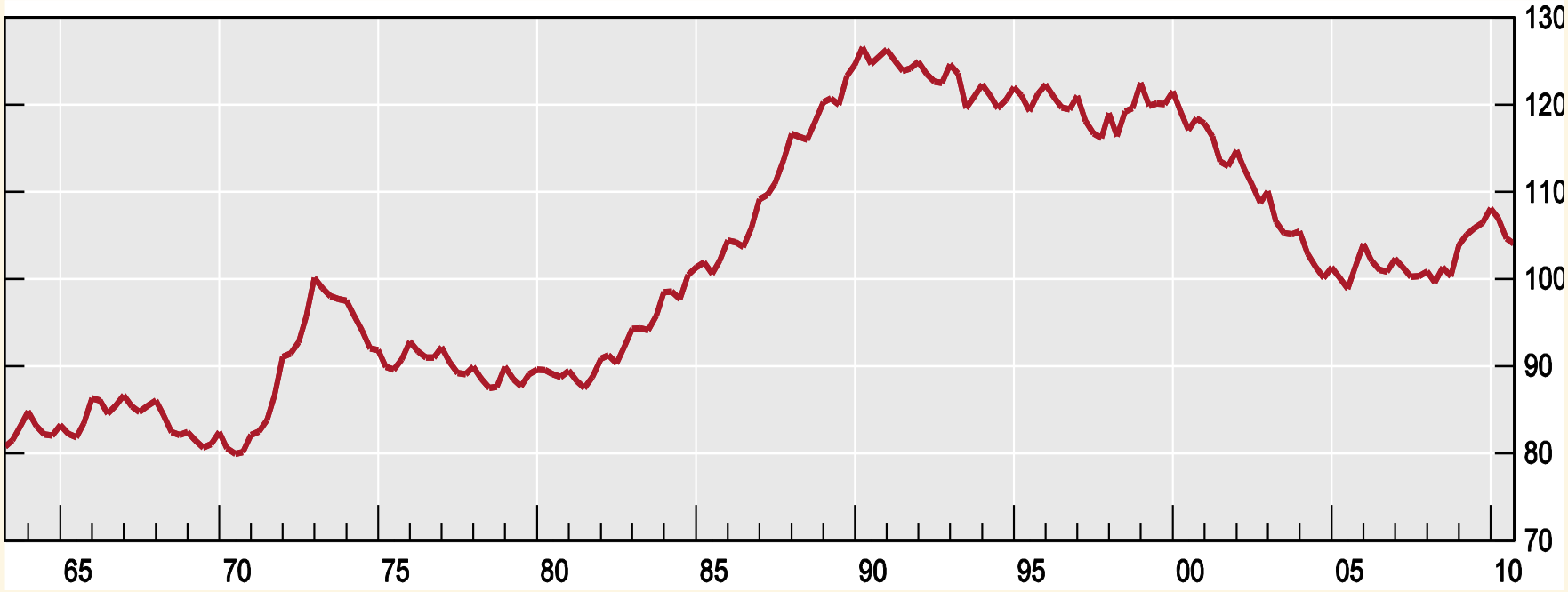
- Maybe not to restrain asset prices.
- More likely to reduce the credit associated with any given rise in asset prices—which will leave banks more robust to a decline in asset prices.
- Not least, that banks are more able to continue lending in the downturn, so that their distress does not reinforce the dynamics of asset price decline, collateral shrinkage, credit restriction and so on.

Cases for counterfactual: what if or if only

- Japan in 1980s ("Tokyo bubble")
- Mexico in the 1990s ("tequila" crisis)
- Spain in 2000s*
- UK in 2000s*
- US in 2000s* * see Caruana @ PBOC
- India in 2000s
- Procedure:
  - Examine raw data on private debt/GDP.
  - Define gap as deviation from existing trend
  - Impose countercyclical capital buffer when gap exceeds a threshold (see Drehmann et al, 2010).

Private credit/GDP ratio[1]

Japan



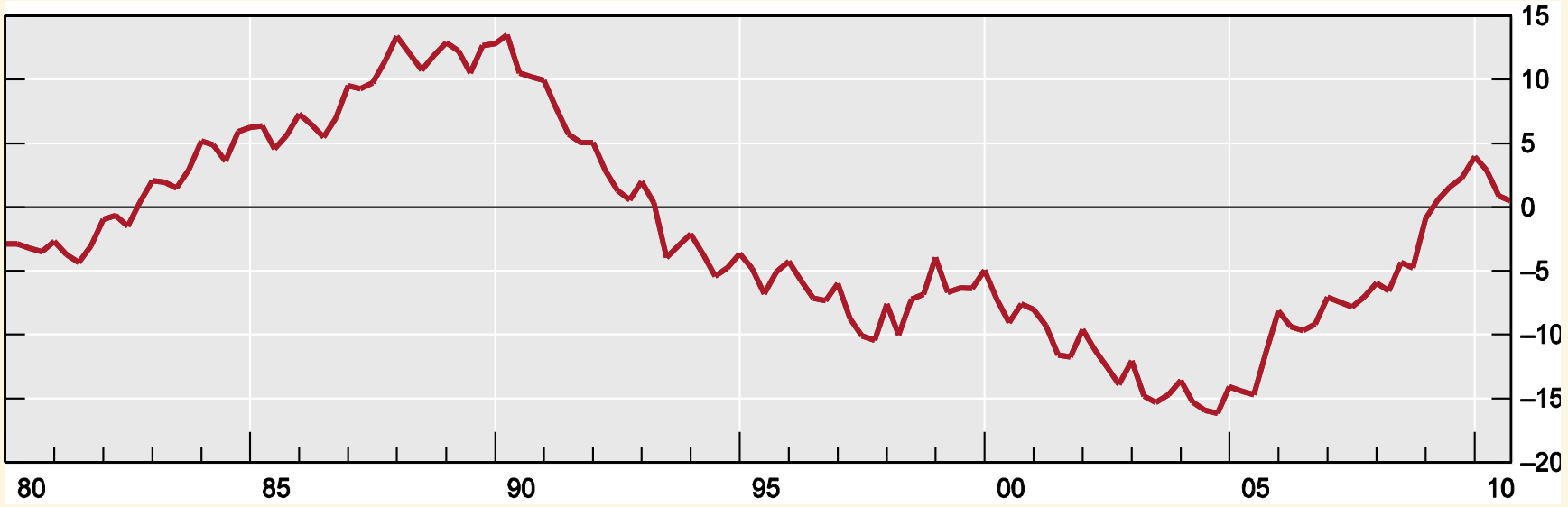
Vertical shaded areas indicate the starting years of system wide banking crises

[1] In per cent.

Source: National data.

Private credit/GDP gap[1]

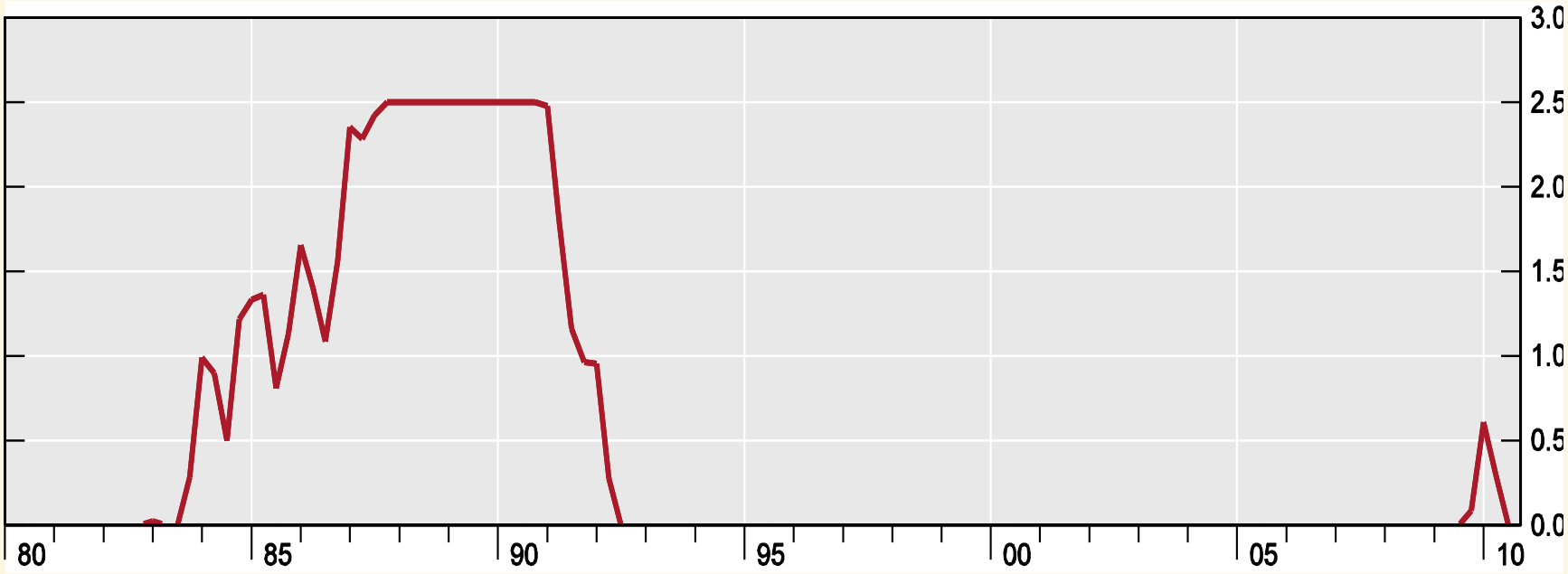
Japan



[1] Deviation of each variable from its one-sided long-term trend (that is, a trend determined only from information available at the time assessments are made); credit/GDP ratio in percentage points; property prices in per cent.

Sources: National data; BIS calculations

Countercyclical capital buffer[1]: Japan



[1] The countercyclical buffer is 0 when the value of the credit/GDP gap is below 2 and 2.5 when it is above 10 per cent; for gaps between 2 and 10 percent the buffer is calculated as 2.5/8 times the value of the credit/GDP gap exceeding 2 per cent.

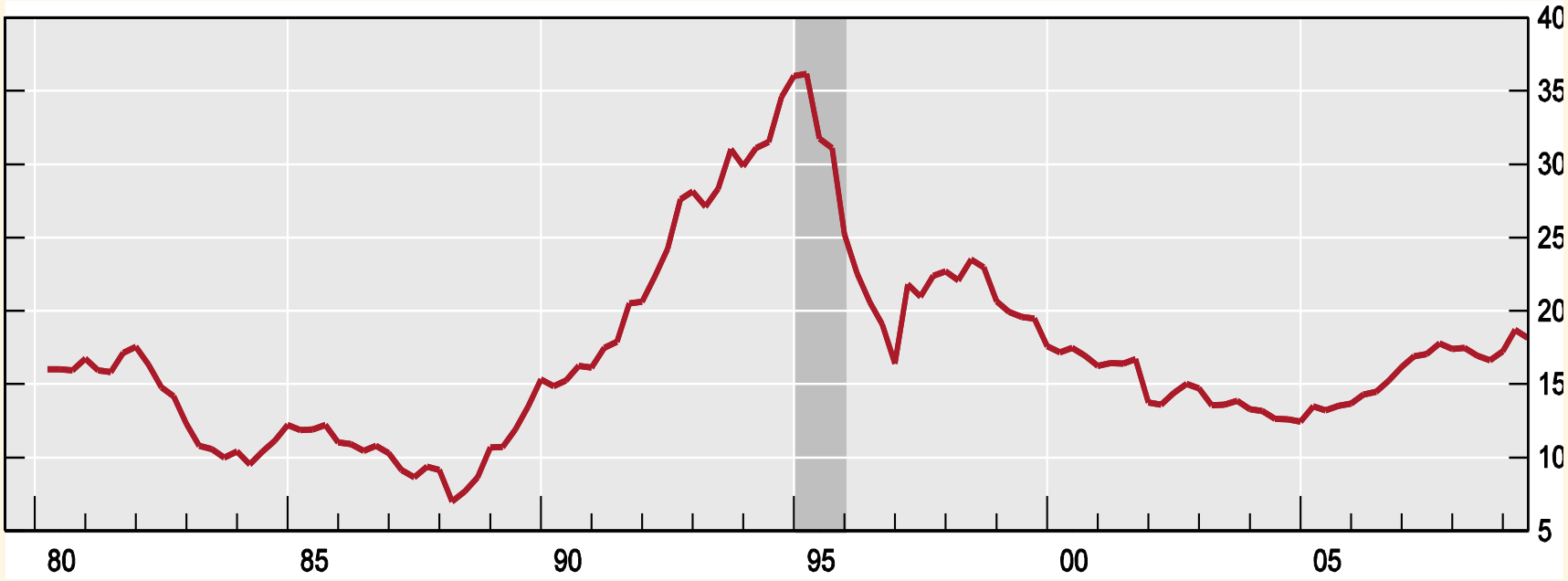
Source: BIS calculations

Case of Japan raises question: would the macroprudential buffer have been enough?

- In some ways, Basel I agreed in late 1980s with an eye to slowing the rapid global expansion of Japanese banks.
- But higher capital requirements did not prevent rapid expansion until collapse of Tokyo bubble after 1989-1990.
- A “natural experiment” suggesting that higher capital requirements won’t work?
- But must recognise the circumstance that Japanese banks had invested more than all of their shareholder funds in equities.
- So as equity prices boomed, Japanese banks were very wealthy on a mark to market basis, and realised gains on cross-held shares in order to boost Tier 1 equity (see Zimmer & McCauley).
- Thus the special circumstances of Japanese banks—the bubble in their vaults, as it were—restricts the generality of the lesson.

Private credit/GDP ratio[1]

Mexico



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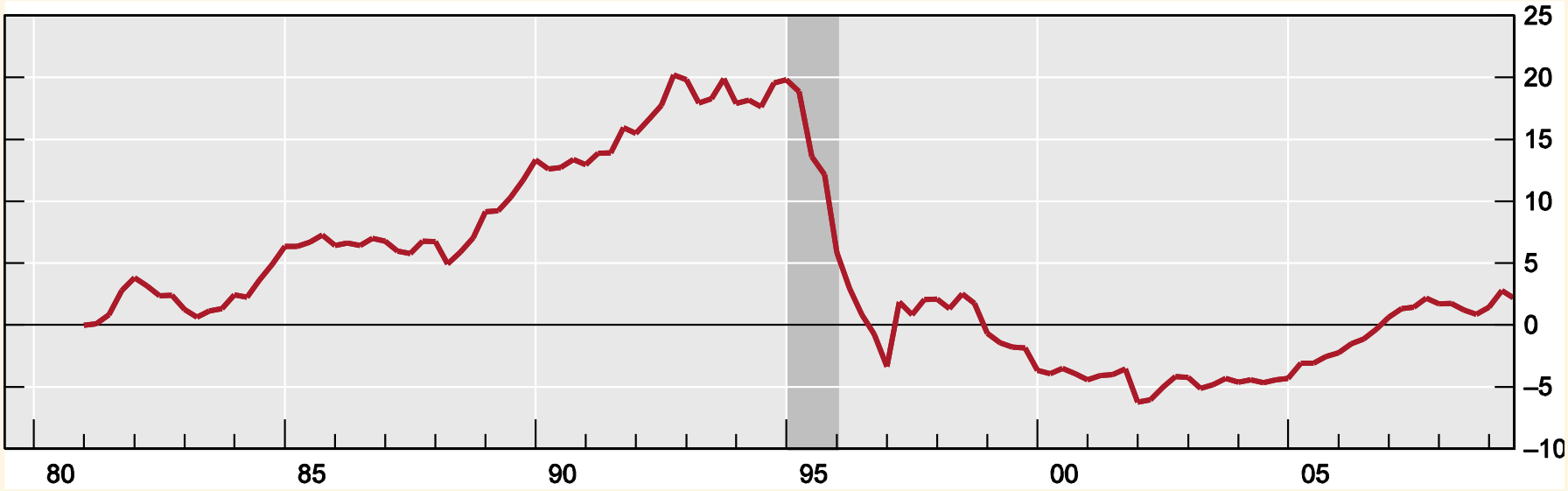

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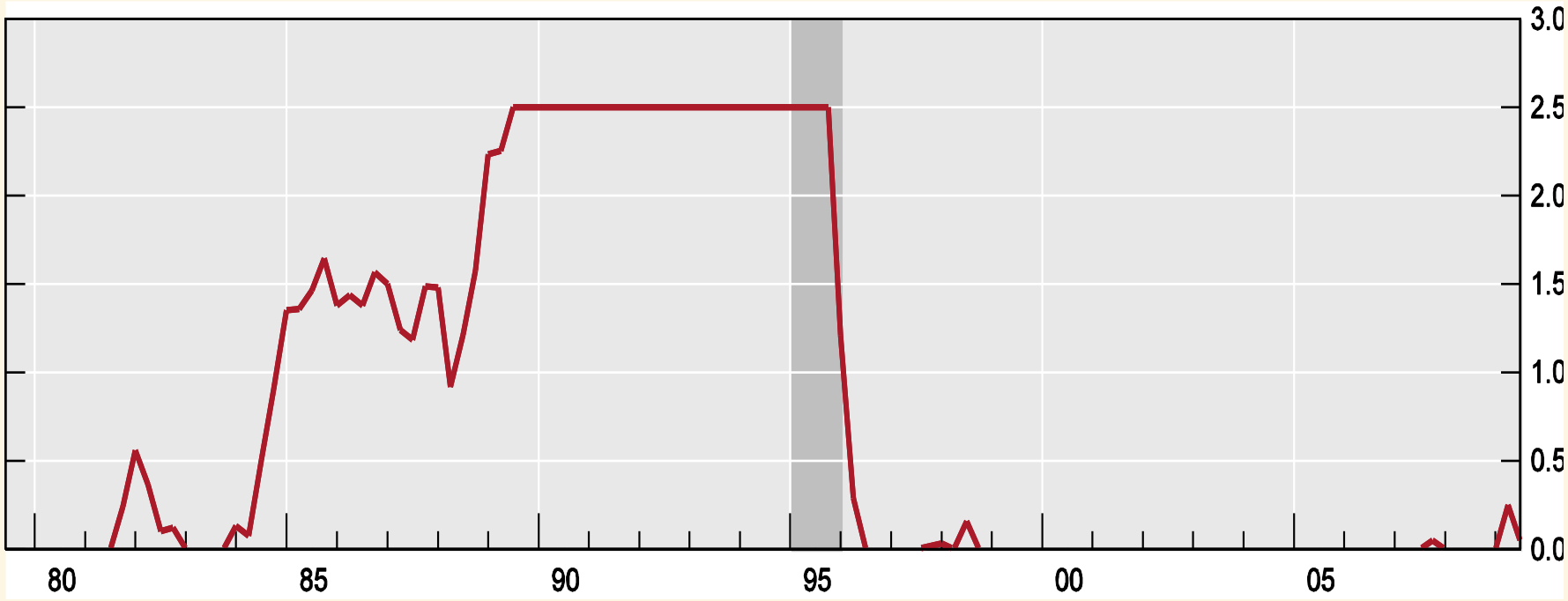

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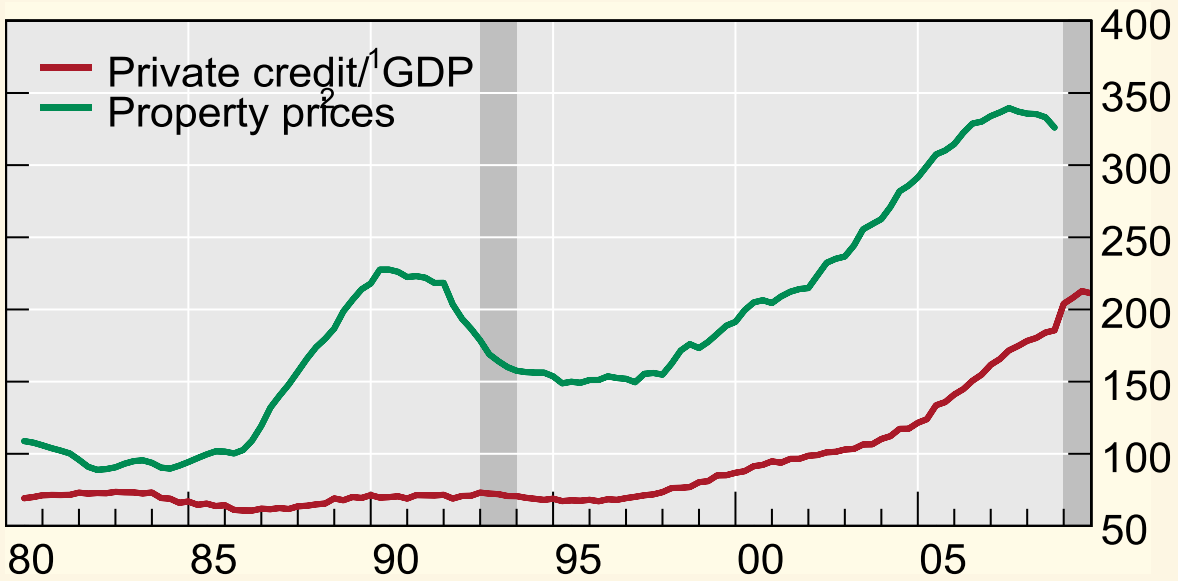
Source: BIS calculations

Case of Mexico illustrates the irrelevance of initial conditions

- After years of near 100% reserve requirements (ie government hogging bank credit), bank claims on private sector comparatively low.
- As a result much complacency about “stock adjustment” process as credit grew rapidly.
- But newly privatised banks competed sharply to extend household credit.
- “Lend in haste, charge off at leisure” (with apologies to William Congreve).

Private credit/GDP ratio and property prices

Spain



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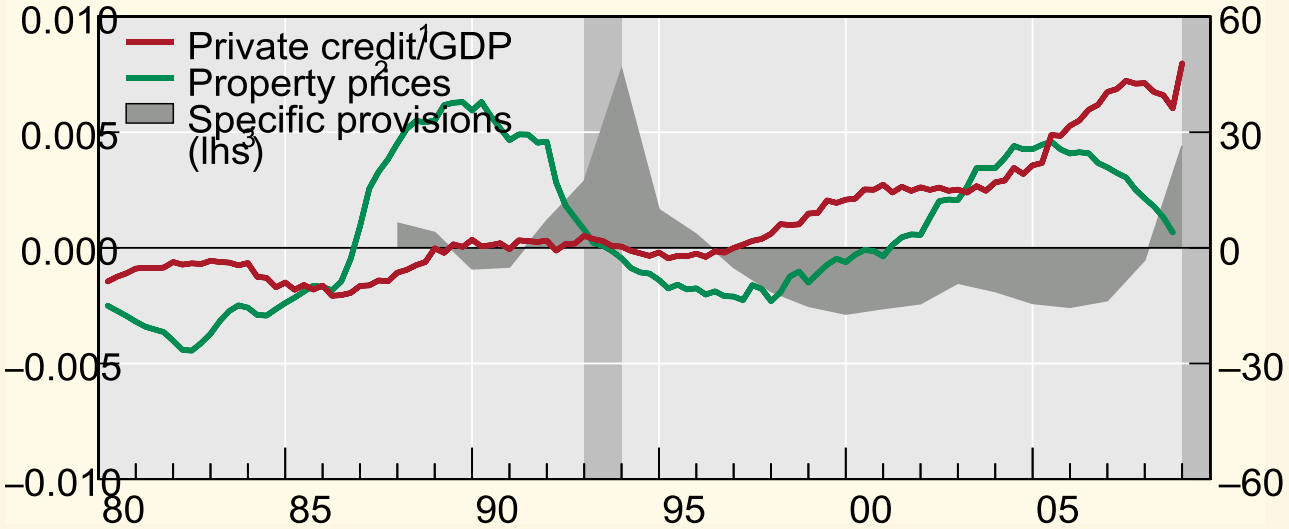
[1] In per cent. [2] Aggregated index including residential and commercial property prices; 1985 = 100.

Source: National data.

Private credit/GDP and property price gaps

Spain



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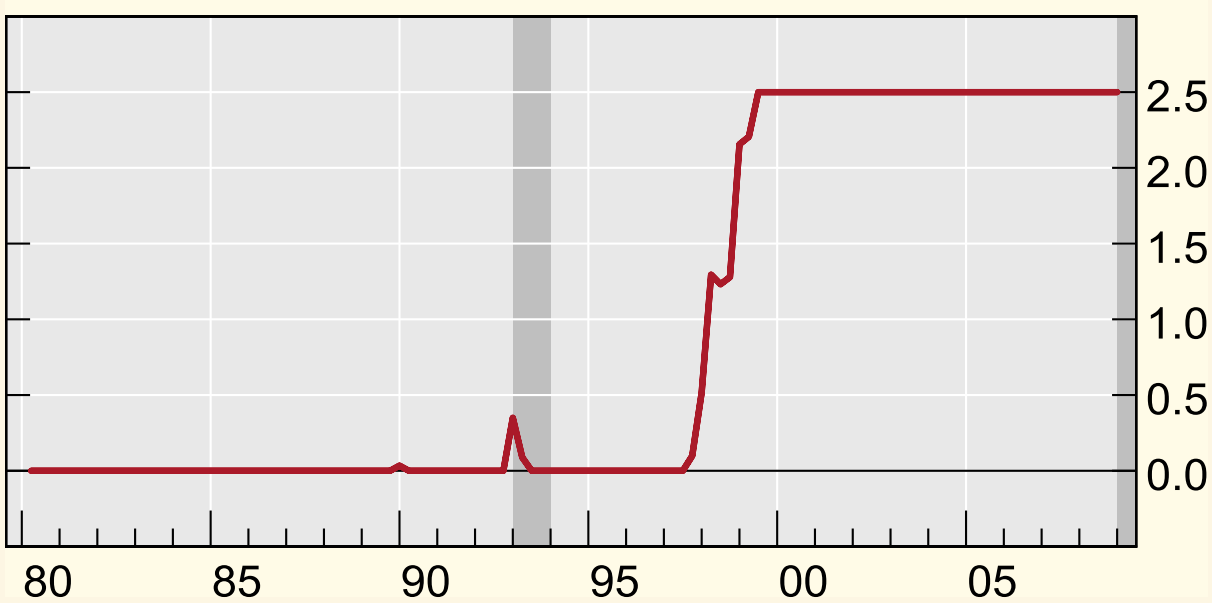
[2] Loans and leases removed from the books and charged against loss reserves, as a percentage of average total loans.

[3] Flow of specific provisions as a percentage of total assets. Deviations from their 15-year rolling average

Sources: National data; BIS calculations

Countercyclical capital buffer[1]: Spain



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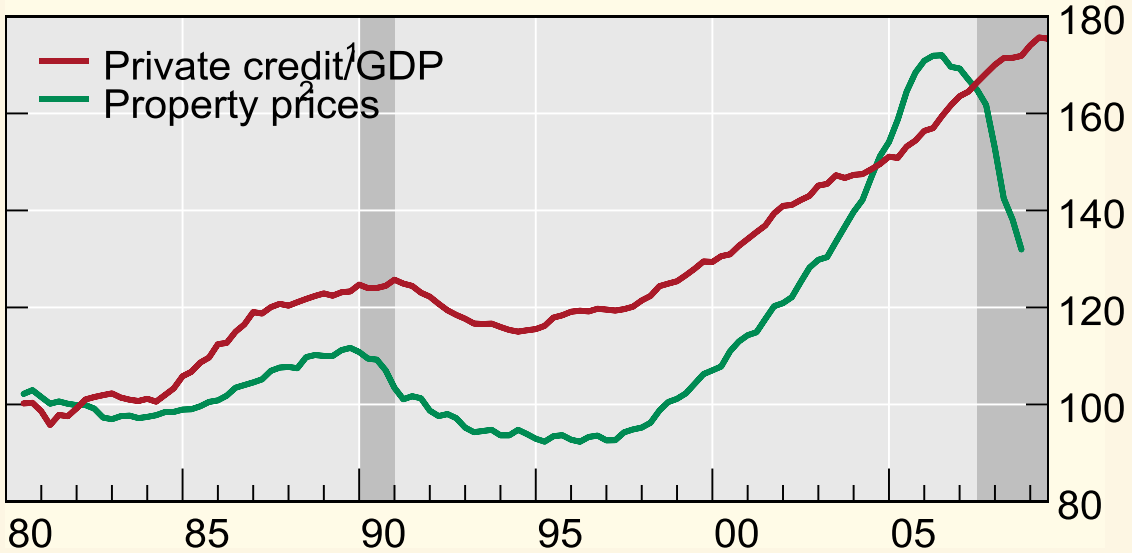
Source: BIS calculations

Case of Spain illustrates that if macro-prudential buffer goes to 2.5% (100%) and stays there, the authorities should do more.

- Eg, the forward-looking provisioning that the Bank of Spain actually adopted.
- Eg, sectoral policies like loan-to-value ratios for real estate development or mortgages.

Private credit/GDP ratio and property prices

United States



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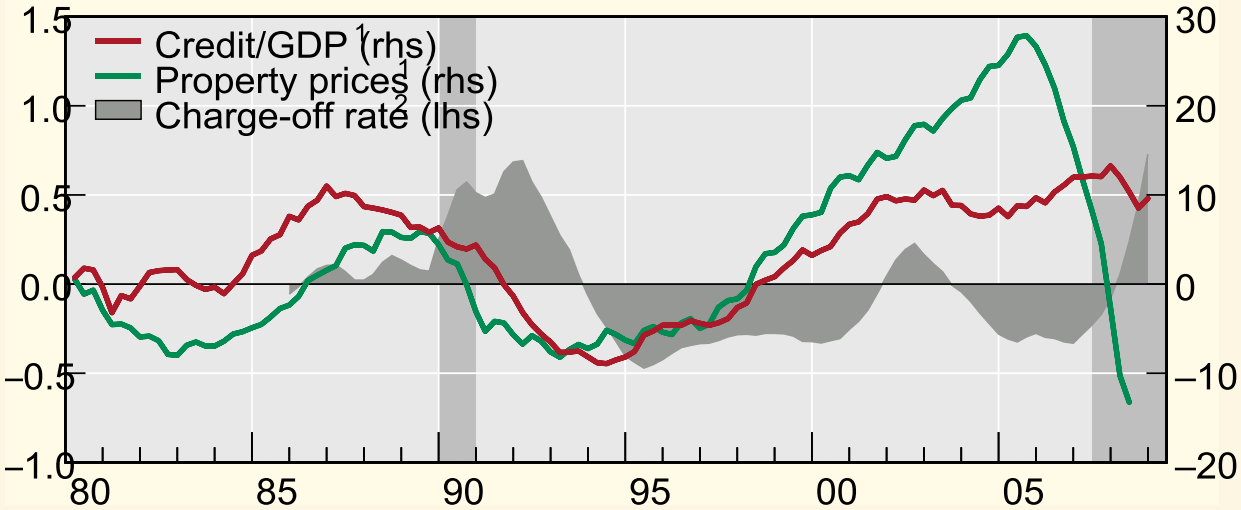

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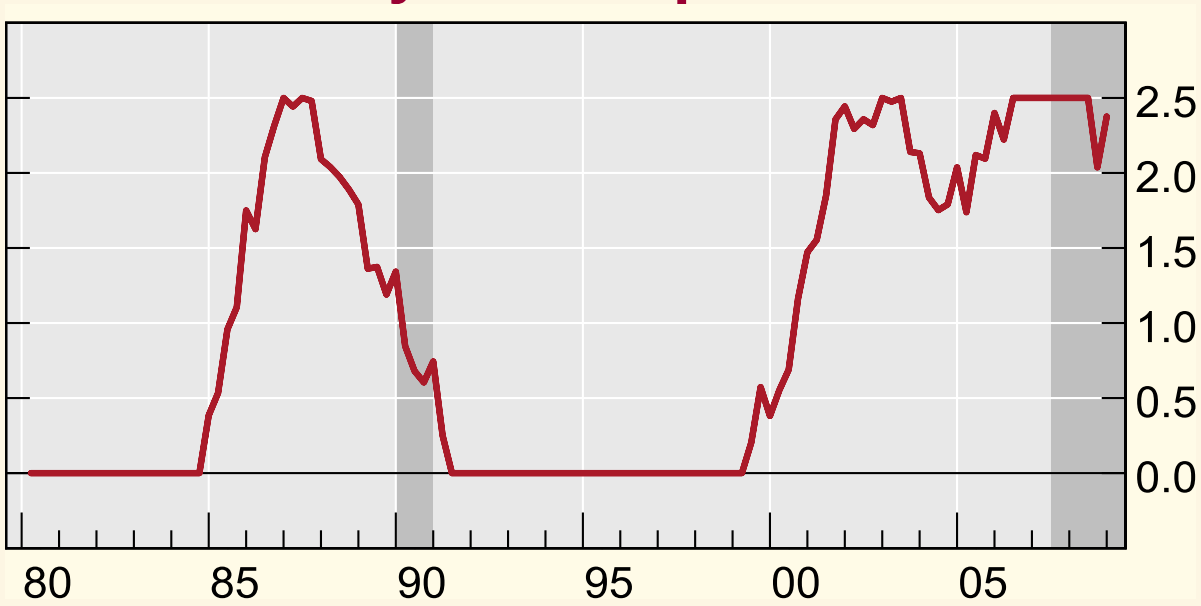

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Private credit/GDP ratio and property prices

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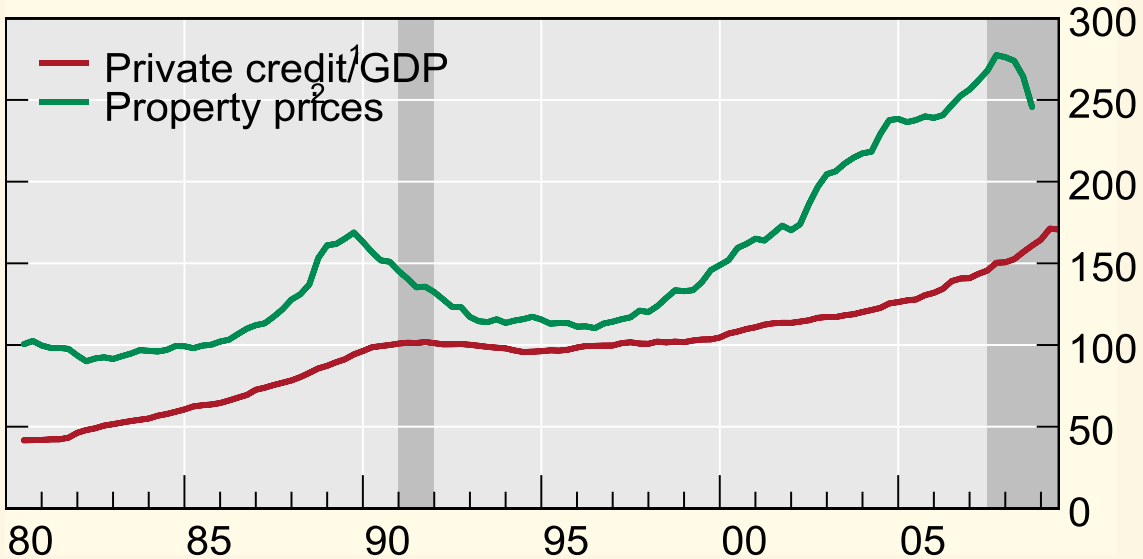

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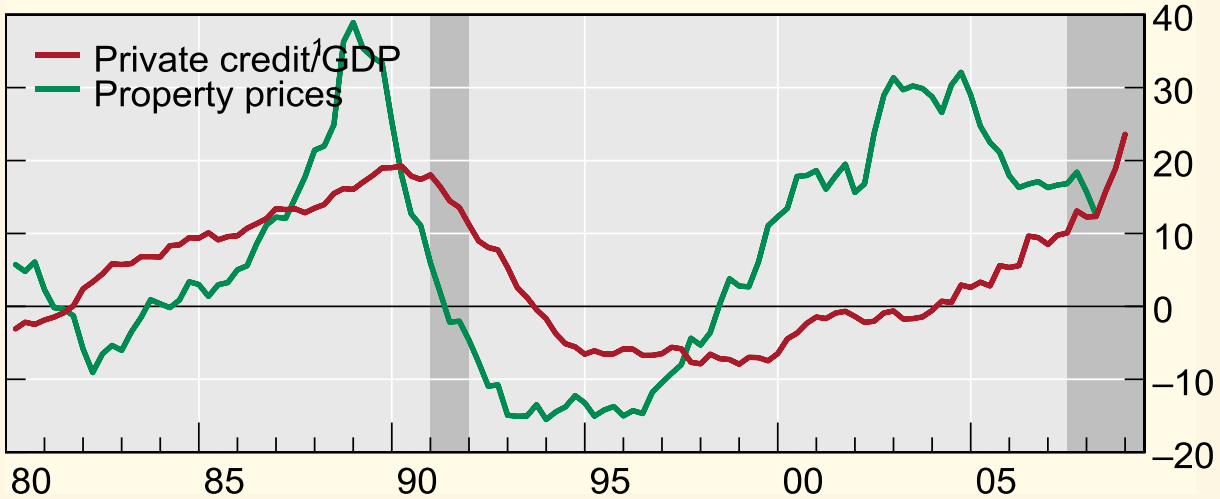

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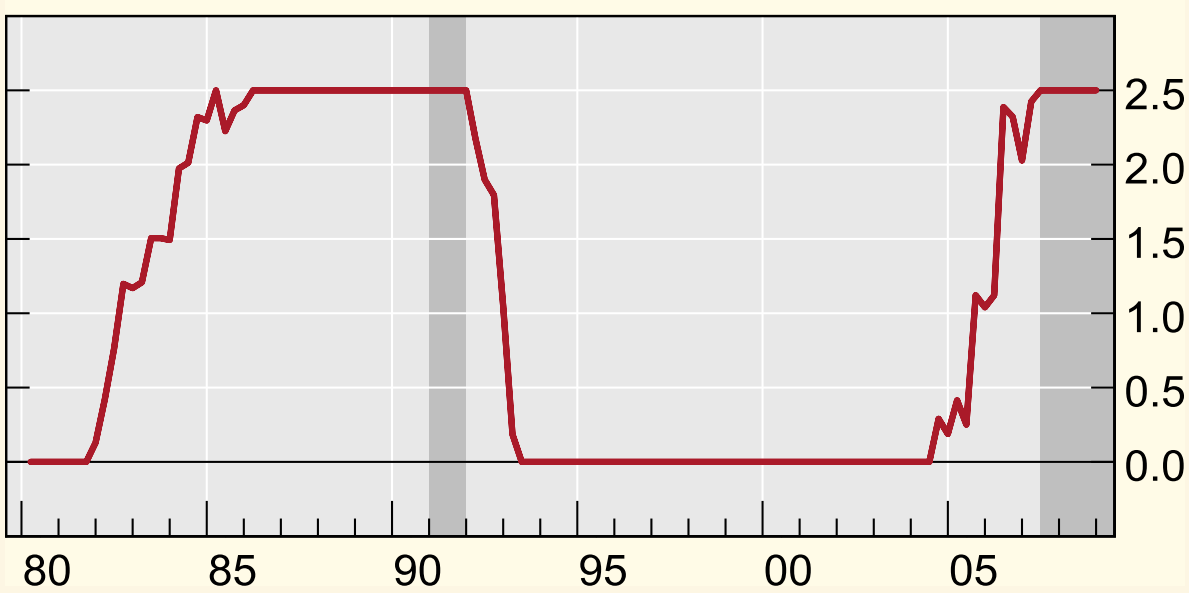

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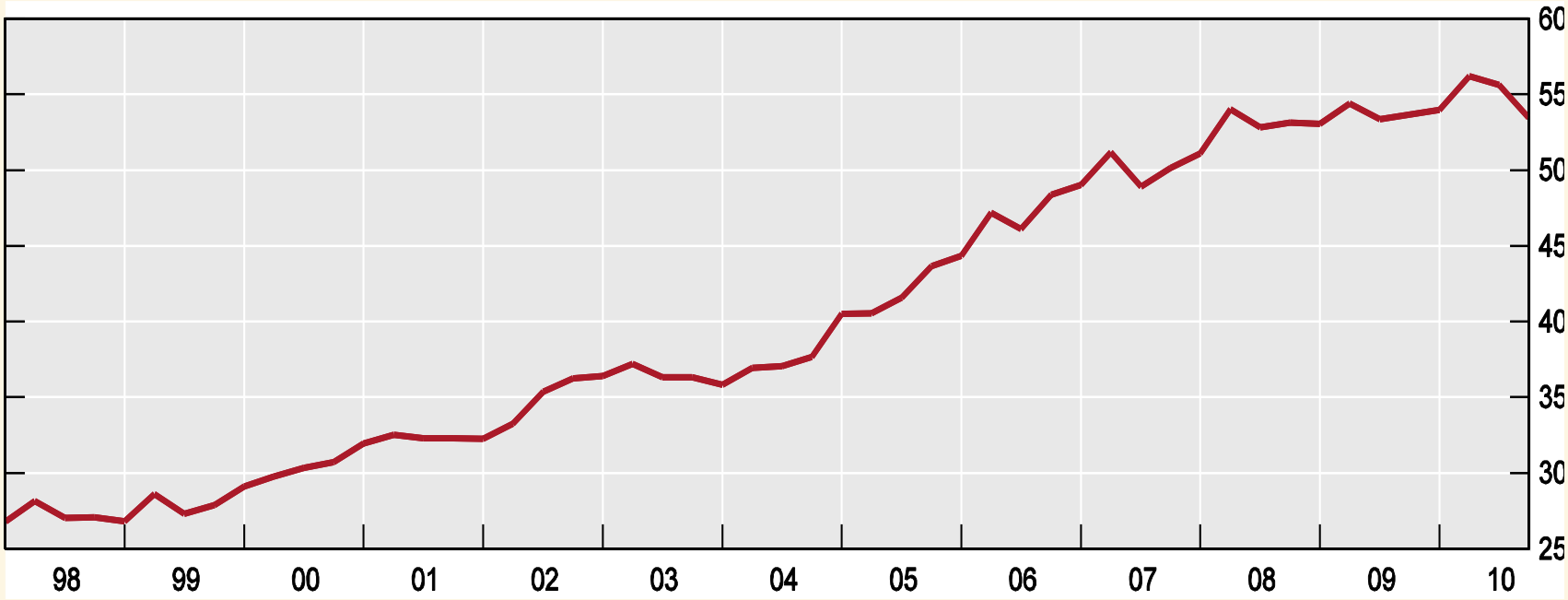

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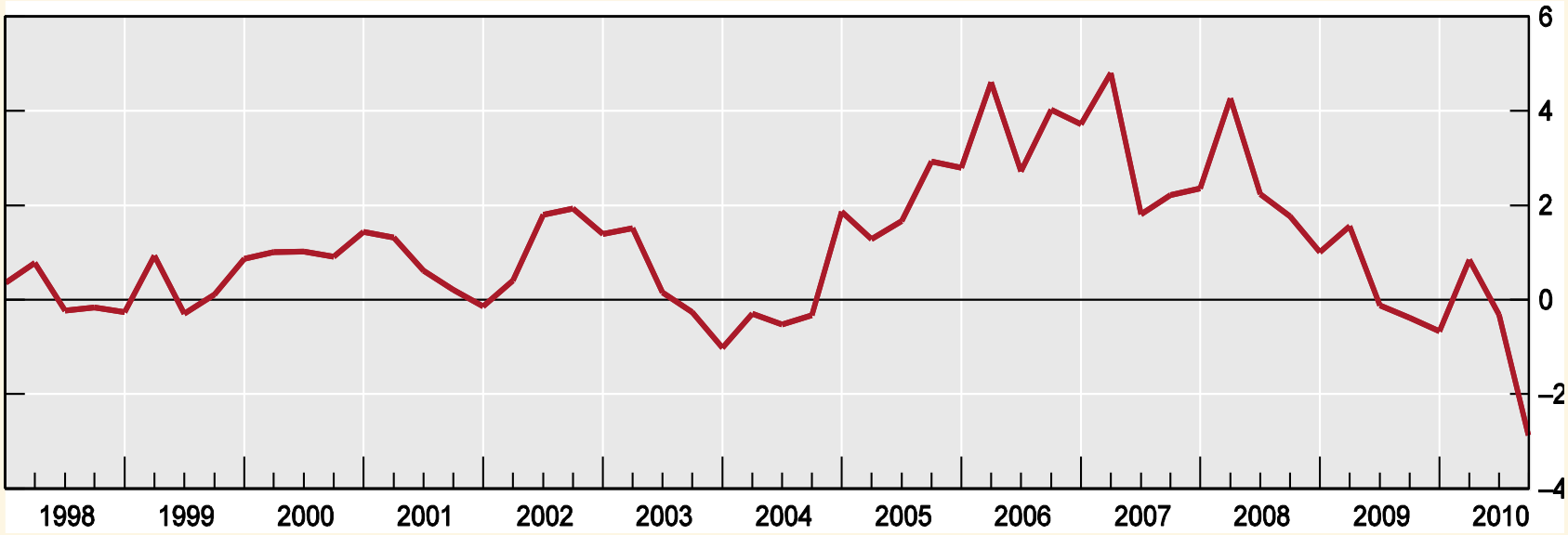

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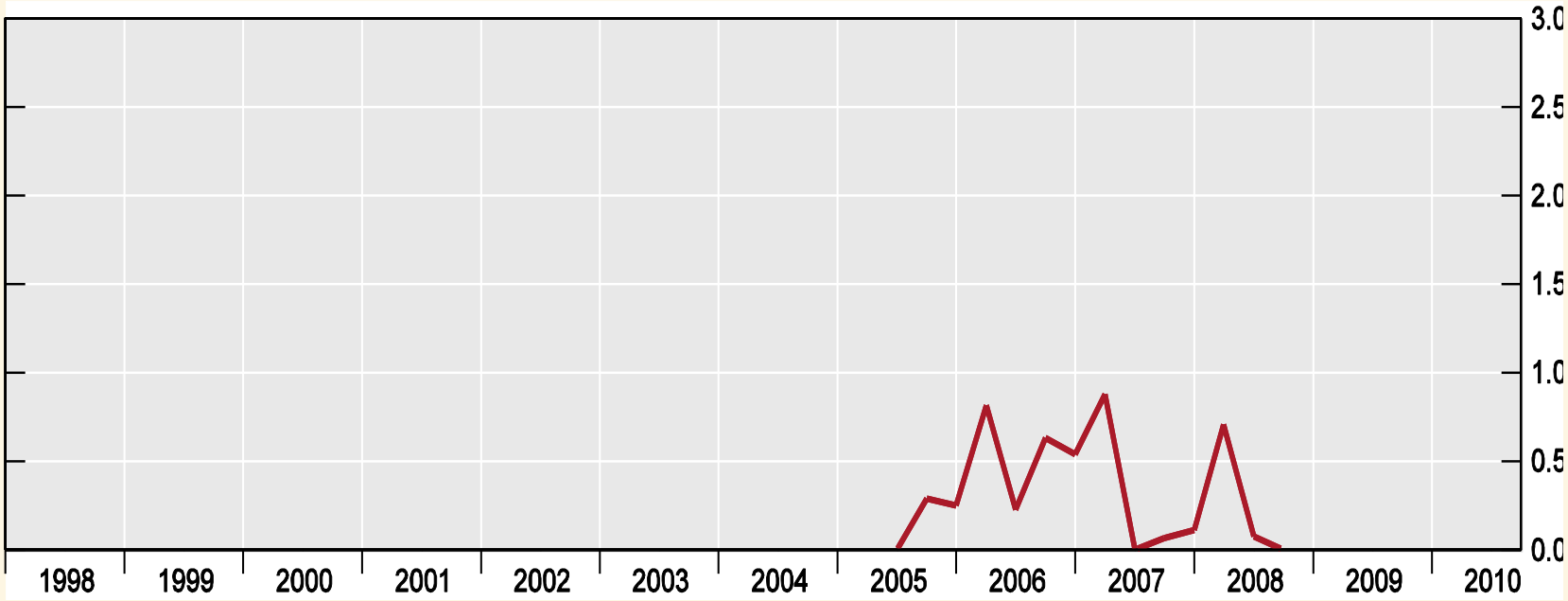

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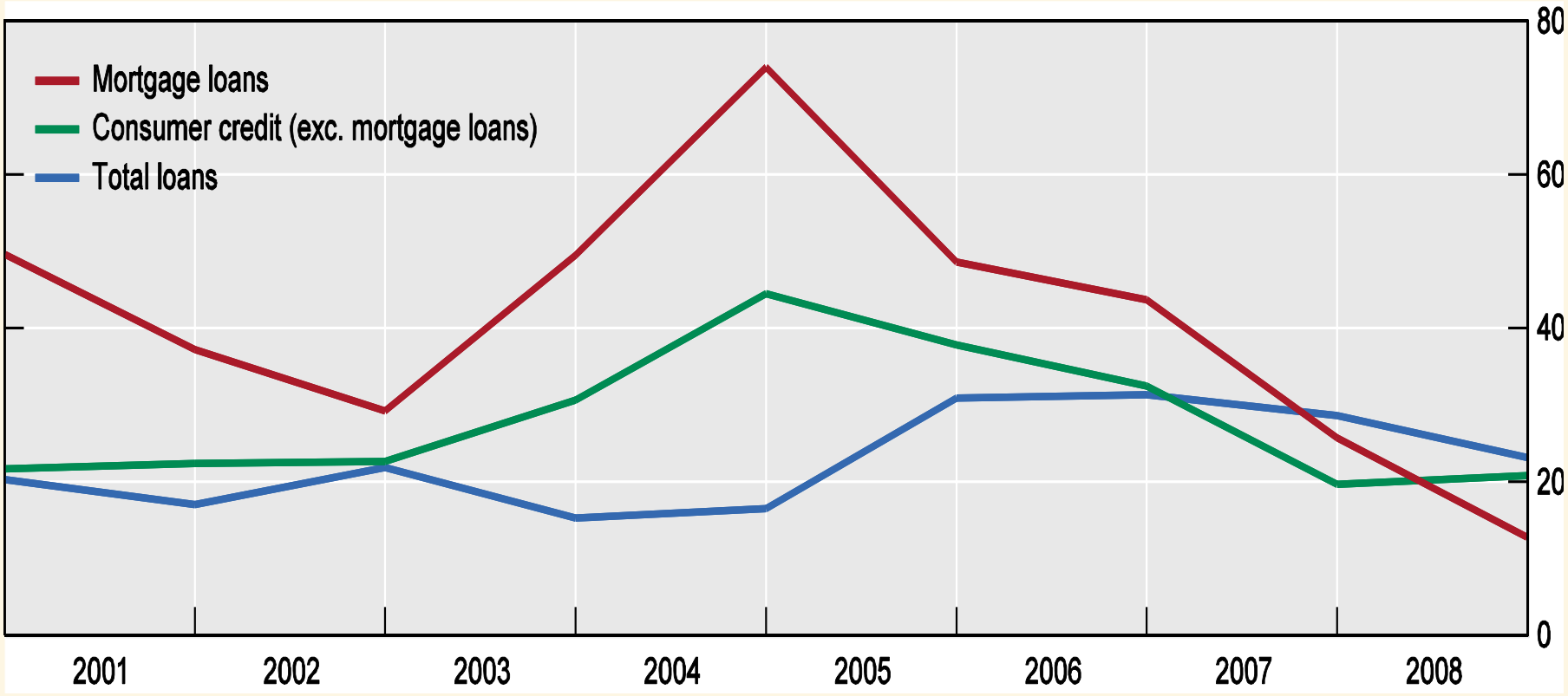
Source: BIS calculations

India illustrates pre-emptive use of similar tools

- In 2004, with 50% growth of mortgages, the RBI upped the Basel 1
  - Weight on mortgages from 50% to 75% and
  - Weight on other consumer credit from 100% to 125%.
  - Note that this was before the countercyclical capital buffer would have been called for, given the data on total private credit.
- Higher reserve requirements were also implemented in this period.
- The result was that household loans decelerated even as business loans accelerated, suggesting prima facie the effectiveness of the RBI measures.
- RBI is innovative in using the Basel weights but not unique.
  - Committee on Global Financial System (2010) catalogued many such macroprudential measures.

Growth of mortgage loans, other consumer loans and total loans in India



Source: Reserve Bank of India.

Countercyclical buffer vs. higher RBI weights: how compare?

	% of loans	Weight-Basel I	% risk-weighted assets	Weight RBI	% risk-weighted assets
Mortgage	12%	50%	6%	75%	9%
Other retail	12%	100%	12%	125%	15%
Commercial, industrial	76%	100%	76%	100%	76%
Total	100%		94%		100%

- Risk-weighted assets up by 6%. So RBI required Tier 1 equity up by 6%.
- Since Tier 1 averaged 8%, RBI required an increase in Tier 1 of 6% X 8% = 0.48%.
- This is very close to the about 0.5% rise suggested by counterclyclical capital buffer several quarters later.
- So hypothetical buffer similar in aggregate to actual RBI policy, though different impact across banks and different incentives/pricing effect—and more pre-emptive!

International supervisory cooperation is wired into the countercyclical capital buffer

- **Buffer must be held against exposures to country X no matter whether held by:**
  - **Banks headquartered in that country.**
  - **Subsidiaries of banks of banks headquartered outside that country operating in that country.**
  - **Cross-border loans to borrowers in that country extended by banks hq'ed outside that country.**
- **Thus domestic banks cannot argue that they are being placed at a competitive disadvantage.**

Conclusions

- The central bank's most important contributions to sustained investments are indirect:
  - Monetary stability; and
  - Financial stability.
- Basel III provides a new means for the authorities to lean against easy credit and asset price booms.
- No guarantee that it is enough:
  - Authorities have a new, internationally sanctioned and enforced tool;
  - Authorities remain responsible to push the button (see Caruana @ Chicago Fed) and to do more if needed.

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