

# **Financial stability and growth in post-reform India: a Minskyan enquiry**

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# Introduction

- The focus of Minsky (1986) was on financial instability arising in the US cyclical context
- But his stabilisation proposals also sought long-term growth and distribution gains
- Since 1992, and through the 2007-8 global crisis, India has combined financial stability with sustained economic growth
- Can a Minskyan examination of India's growth-with- 'hedge' finance experience offer more general insight into financial *instability*?

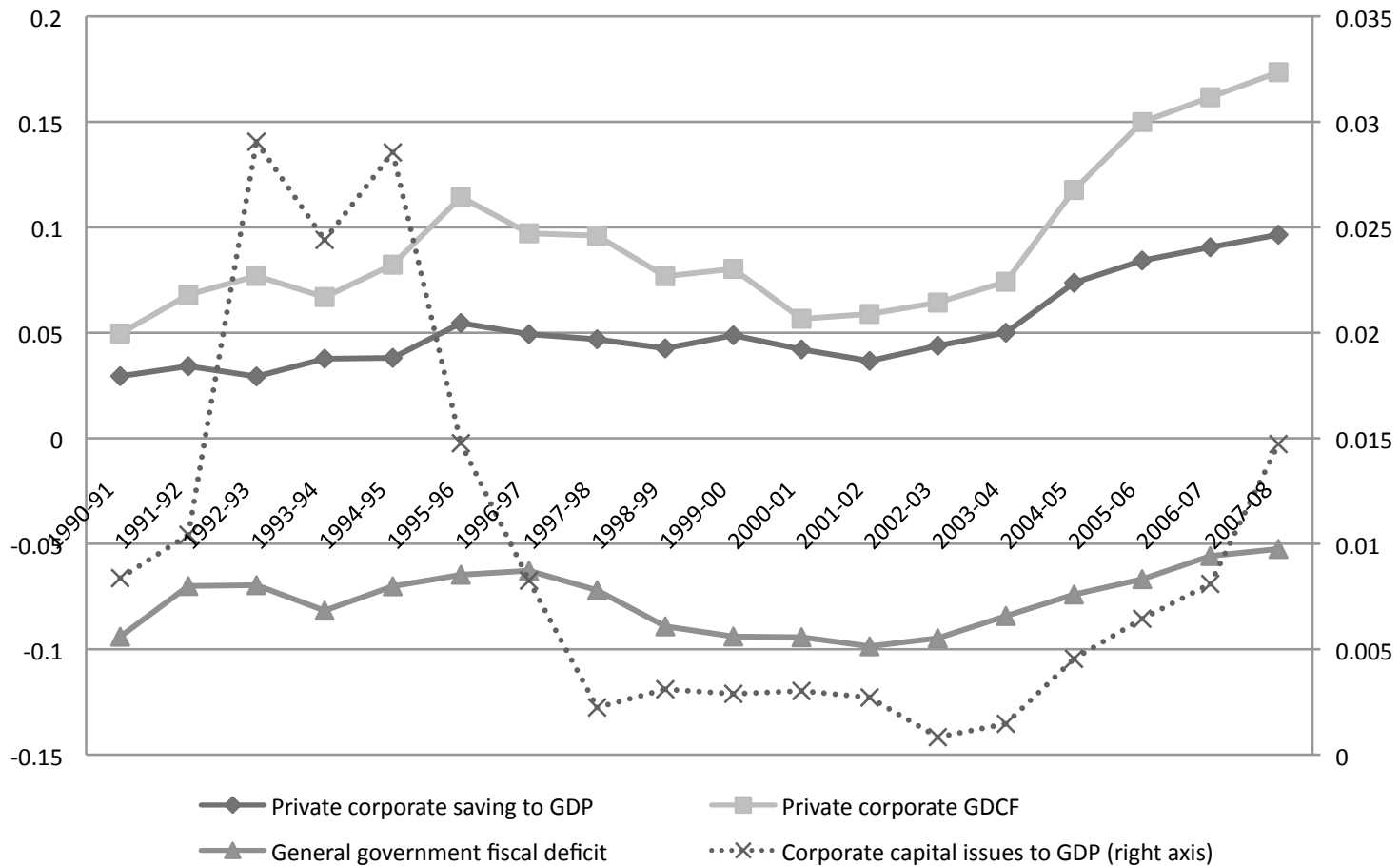
# ‘Investment is Profits’?

- Preparing for an earlier BNUIF meeting *NS* noted Kalecki’s visit to India in early 1960, and his view that industrialisation could be self-financing – Minsky’s ‘investment is profits’
- Correspondence with *JM* highlighted the Kalecki-Minsky connection and the idea of applying it to India’s recent growth
- *NS* provided the Indian material with *JM* responsible for the Minskyan perspective

# Profits are not *only* investment

- Minsky noted that investment could not be entirely profit-funded due to existing financial obligations and ancillary spending
- External finance was essential, and public budget deficits could support profitability – ***both*** are important in India ***due to B of P deficits*** and the ***domestic focus of manufacturing*** industry
- Unlike China, India's growth (6.3% 1992-07 and 8.7% 2002-07) has not normally involved external surpluses – the following 'balances' illustrate:

# Public deficits and manufacturing investment-saving balances



# Growth phases after liberalisation

- Following extensive reforms in 1992, Indian firms re-equipped vigorously until 1996-7 with the aid of extensive capital issues (40% of corporate investment in 1992-95)
- Activity slackened from 1997 through to the world slowdown of the early 2000s - the budget deficit reached 11% of GDP (2002-03)
- The subsequent 8.7% growth trend was only mildly disturbed by 2007-08 developments

# The public budget and profits

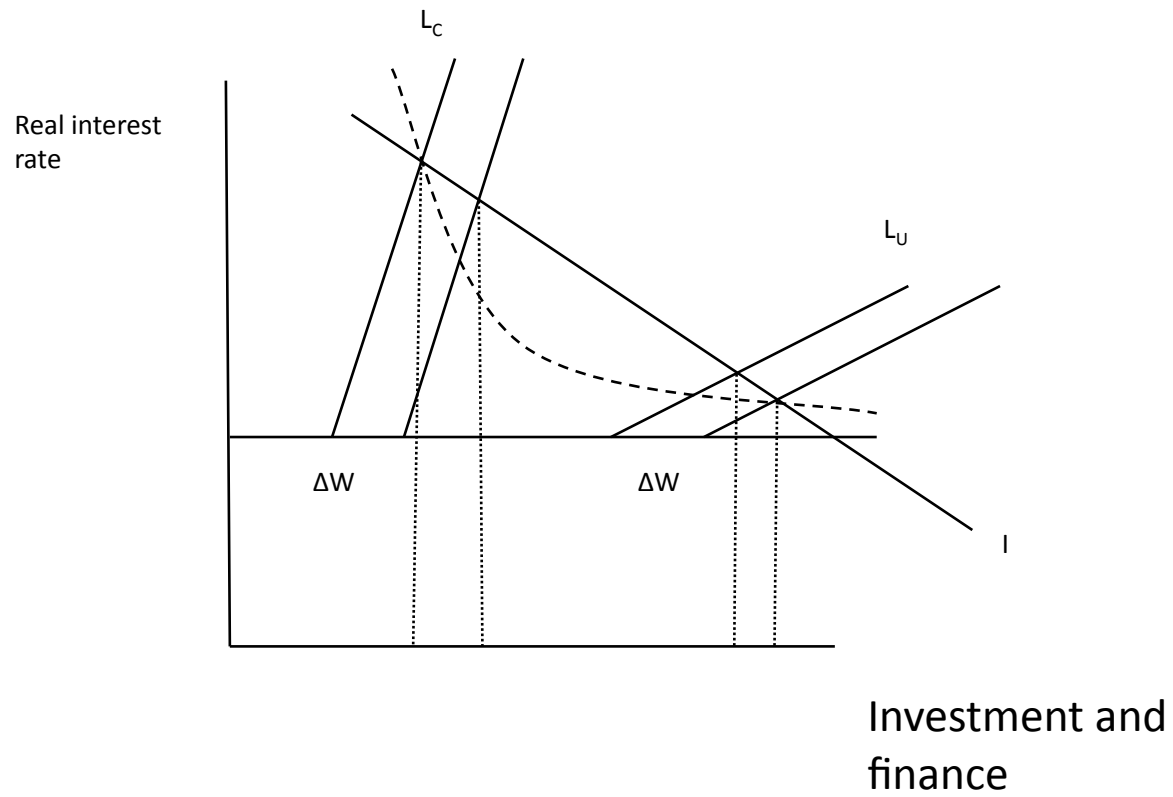
- The pattern in the chart seems to confirm Minsky's view that budget deficits can support business profits in the downturn - and India certainly has Big Government!
- ***But how did the corporate investment-profits relationship behave over this period?***
- A natural line of empirical enquiry is the business investment-cash flow relationship

# Cash flows and financing constraints

- Fazzari *et.al* (1988), argued that investment-cash flow correlations could reveal external funding constraints
- Fazzari argued *here* that this work helped to reconcile Minsky with the 'mainstream' (1999)
- But Minsky's thinking actually *undermines* the test for a reason that is important in India
- First review the argument:



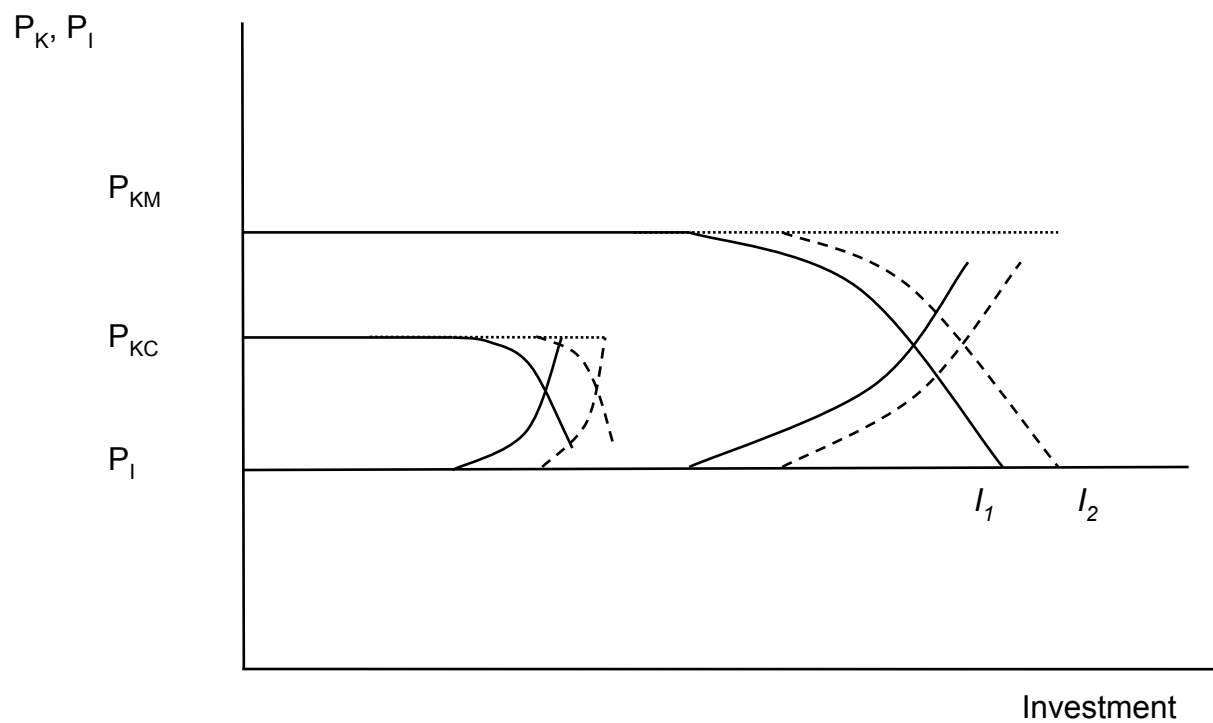
# The theory



# Owner's risk

- The curved investment function is a Kaplan/ Zingales criticism ***but a more plausible one in India is close control of firms***
- Keynes' borrower's (owner's) risk seems relevant here
- Could a financially ***un***constrained firm exhibit investment-cash flow sensitivity?
- Keynes' argument (Minsky's diagram) suggests so:

# Borrower's and lender's risk



# A joint hypothesis?

- In India, most firms are closely controlled and owners' risk is likely to be an important constraint on external financing ***even in the absence of market borrowing constraints ( $I_1, I_2$ )***
- The test regresses cash investment spending by a firm on cash flow (both deflated by beginning-of-year GFA) and on the share price-book ratio
- ***If*** small firms show greater cash flow sensitivity, it suggests ***both*** that lenders' risk dominates ***and*** that small firms are more vulnerable to it – ***eg.***

# Textiles: a special case?

Dependent variable:  $\text{Investment}_t/\text{GFA}_{t-1}$

|                                | <b>Q1</b> | <b>Q2</b> | <b>Q3</b> | <b>Q4</b> |
|--------------------------------|-----------|-----------|-----------|-----------|
| $\text{CF}_t/\text{GFA}_{t-1}$ | 0.069592  | 0.204879  | 0.154684  | 0.040872  |
| St. error                      | 0.038771  | 0.036991  | 0.040598  | 0.043225  |
| $\text{PBOOK}_{t-1}$           | 0.022116  | 0.014005  | 0.030868  | 0.028244  |
| St. error                      | 0.009974  | 0.008024  | 0.006925  | 0.006411  |
| CF SHARES                      | 0.934088  | 0.956281  | 0.980763  | 0.810337  |
| St. error                      | 0.171527  | 0.154533  | 0.138526  | 0.123211  |
| Adj R <sup>2</sup>             | 0.291764  | 0.373666  | 0.351011  | 0.385458  |
| Obs.                           | 491       | 587       | 674       | 720       |

# Owners' risk after all?

- The Q2,Q3 coefficients for ***cash flow*** are comparatively high for textiles – but ***insignificant*** for Q1,Q4
- New share issue is strongly linked to new fixed investment in the sector
- Textiles, with special access to loans, has high gearing – were firms trying to reduce it?
- Owner's risk evident elsewhere. Cash flow is normally significant ***but the coefficient size is generally small. Why?***
- ***Cash flows used to limit or cut debt – 2 examples***

# Chemicals and textiles

| <b>Chemicals</b>   | <b>Q1</b> | <b>Q2</b> | <b>Q3</b> | <b>Q4</b> |
|--------------------|-----------|-----------|-----------|-----------|
| $CF_t/GFA_{t-1}$   | -0.19795  | -0.29922  | -0.30308  | -0.21752  |
| <i>se</i>          | 0.024602  | 0.025243  | 0.022638  | 0.028912  |
| $BDEBTGFA_{t-1}$   | -0.12803  | -0.09658  | -0.15699  | -0.15362  |
| <i>se</i>          | 0.023086  | 0.025162  | 0.022706  | 0.024318  |
| Adj R <sup>2</sup> | 0.120111  | 0.274999  | 0.223922  | 0.128958  |
| Obs.               | 1189      | 1351      | 1377      | 1408      |

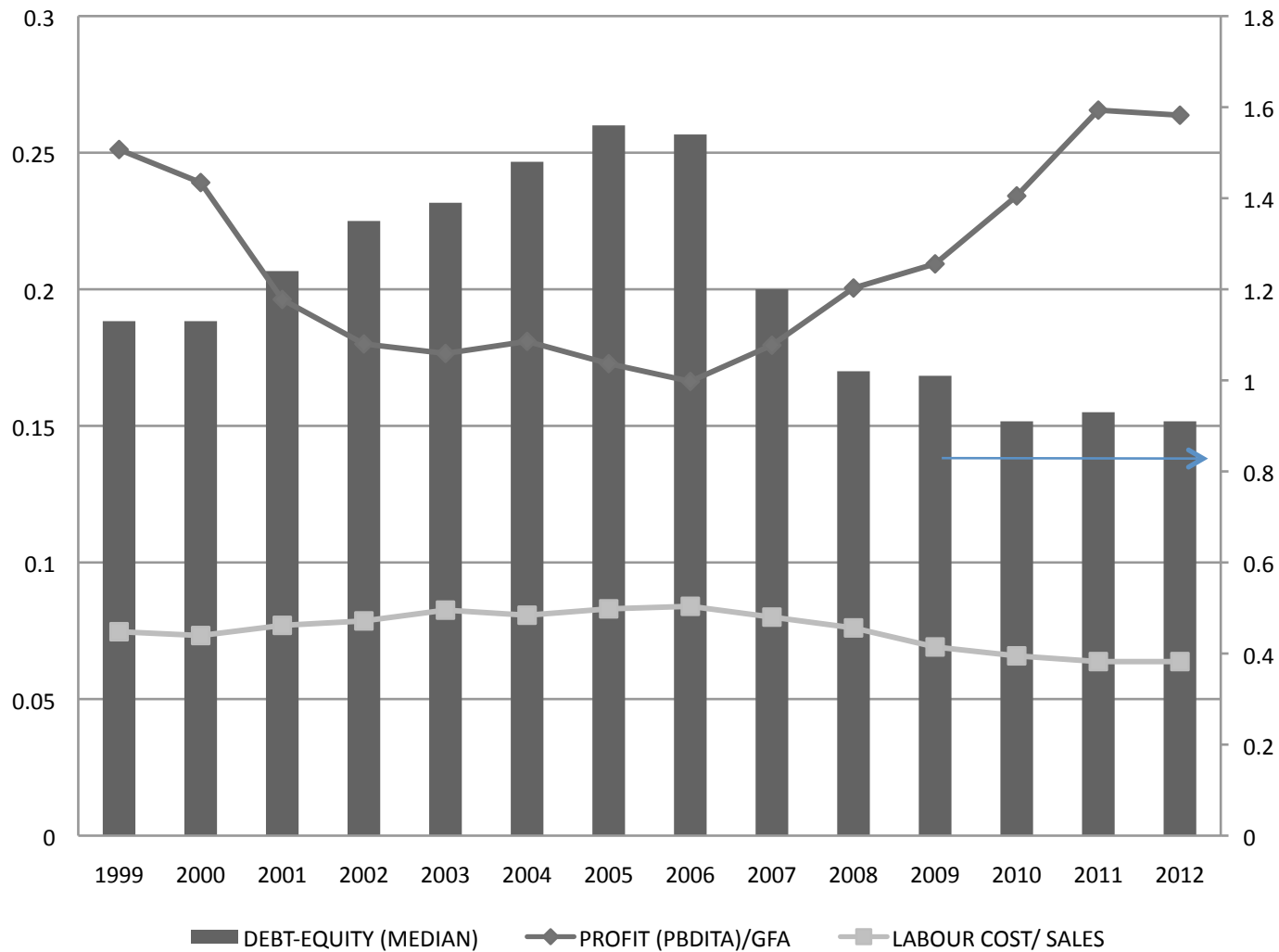
| <b>Textiles</b>    | <b>Q1</b> | <b>Q2</b> | <b>Q3</b> | <b>Q4</b> |
|--------------------|-----------|-----------|-----------|-----------|
| $CF_t/GFA_{t-1}$   | -0.31227  | -0.47846  | -0.37893  | -0.47541  |
| <i>se</i>          | 0.043925  | 0.04651   | 0.057598  | 0.055319  |
| $BDEBTGFA_{t-1}$   | -0.08797  | -0.09457  | -0.0451   | -0.11203  |
| <i>se</i>          | 0.032292  | 0.034258  | 0.035492  | 0.036893  |
| Adj R <sup>2</sup> | 0.212225  | 0.224088  | 0.168132  | 0.223581  |
| Obs.               | 639       | 694       | 730       | 738       |

# 'Hedge' finance and growth

- As in these examples, gearing was being reduced generally - *new* bank borrowing correlated *negatively* with cash flow and with *existing* bank debt – ***two interpretations?***
- ***Lender's risk*** suggests fund ***supply*** limits but ***owner's risk*** implies ***demand*** limits for funds
- ***Demand-side limits*** are consistent with the low cash flow coefficients in the investment regressions
- But ***supply*** constraints are also thought to apply in India – ***could both be relevant?***



# Profitability and de-leveraging



# Lender's risk and the downturn

- Softening of investment spending from 1996-2002/3 (seen earlier) is linked to weaker profitability and deteriorating gearing ratios
- (Real interest rates were rising towards 9% over these years)
- Profits recovered after 2003 and debt ratios were improving
- Was lender's risk higher before 2003?

# From cash flow to capacity

|                                     | Chemicals |          | Food and beverages |          | Machinery |          |
|-------------------------------------|-----------|----------|--------------------|----------|-----------|----------|
|                                     | 1999-03   | 2003-07  | 1999-03            | 2003-07  | 1999-03   | 2003-07  |
| CF <sub>t</sub> /GFA <sub>t-1</sub> | 0.080713  | 0.043634 | 0.080862           | 0.038896 | 0.064206  | 0.027992 |
| <i>se</i>                           | 0.011301  | 0.010682 | 0.015367           | 0.015137 | 0.011894  | 0.010703 |
| UTN                                 | 0.019551  | 0.034206 | 0.004011           | 0.011872 | 0.015996  | 0.022834 |
| <i>se</i>                           | 0.00263   | 0.002951 | 0.002138           | 0.003451 | 0.002654  | 0.002419 |
| CF SHARES                           | 0.417605  | 0.296054 | 0.237805           | 0.394071 | 0.1314    | 0.25757  |
| <i>se</i>                           | 0.045098  | 0.039503 | 0.069871           | 0.062166 | 0.036133  | 0.030744 |
| Adj R                               | 0.388749  | 0.491929 | 0.339541           | 0.438612 | 0.354949  | 0.49448  |
| Obs.                                | 2928      | 2992     | 1327               | 1347     | 1695      | 1682     |

# Is credit pro-cyclical?

- In these (typical) cases cash flow constraints seem to have been stronger when profitability was lower (pre-2002)
- Capacity utilisation became critical after profits recovered – and cash flow constraints were less significant
- Growing investment funded by profits so that book gearing continued to decline

# Conclusions: Minsky and growth

- Credit and the cycle are positively related as Minsky argued – but mainly due to relaxation of lending limits on investment, not to financial innovation
- Close control of firms effectively limits appetite for speculative finance – investment is (mainly) profits and investment *incentives* are critical
- Lagging agriculture is important in India as Kalecki recognised, though the mechanism is closer to Minsky:
  - (i) food price inflation tends to tighten monetary policy, increasing credit constraints and damping investment
  - (ii) (public) investment in agriculture can ease (i) and **crowd-in** private investment according to RBI studies