The Role of Internally Financed Capex in Rising Chinese Corporate Debts

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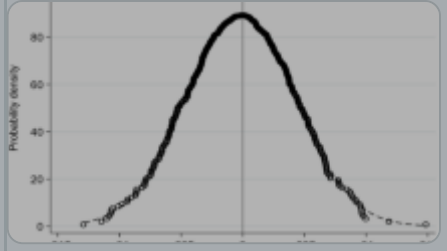
Comparative Economic Studies

Aims and scope →

investment efficiency as a possible important driver behind China's high and rising corporate leverage, in light of its high investment rate and low internally funded capex ratio.



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4. The estimation results under benchmark estimation Eqs. (B), (C) and (D) are quite similar and will not be reported in the paper.

5. The potential weakness of the difference-GMM estimator is that lagged levels are often rather poor instruments for first-differenced variables. The system-GMM estimator includes lagged levels as well as lagged differences (Arellano and Bover 1995; Bond et al. 2001).

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Appendices

Appendix A: Variables definitions and data sources

Corporate debt	Credit to non-financial corporations from all sectors at market value in percentage of GDP. Data sources: BIS, OECD and IMF
Internally funded corporate capital expenditure	Ratio of corporate earnings to gross capital formation of non-financial corporates. Corporate earnings defined as disposable income of non-financial corporates adjusted for the net acquisition of non-financial assets. Data sources: OECD, and authors' calculation
Government debt	Credit to general government from all sectors at market value in percentage of GDP except Argentina, Brazil, China, Indonesia, India, Mexico, Russia, Saudi Arabia and South Africa and emerging markets (as a whole) for which we use the only available nominal values in percentage of GDP instead. Data sources: BIS, OECD and IMF
Crisis	Dummy variable of the global financial crisis. Two alternatives: (1) crisis 0810 takes value

Corporate debt to equity ratio	Ratio of corporate debt to total market capitalization of listed domestic companies in percentage of GDP. Market capitalization is the share price times the number of shares outstanding (all classes) for listed domestic companies, end of year values. Data sources: BIS, World Bank WDI (CM.MKT.LCAP.GD.ZS), and authors' calculation
Bond yield	Year-end 10-year government bond yield. Data sources: OECD and Bloomberg
Global growth rate	Annual percentage growth rate of GDP at market prices based on constant local currency and constant 2010 US dollars. Data sources: World Bank and OECD
G3 policy rate	Averaged policy interest rate of USA, Japan and Euro area. Lombard rate of Bundesbank is used for the euro area for the period from 1995 to 1998. Yearly averaged data and year-end data are both used. Data sources: BIS, St. Louis FED and Bundesbank
USDNEER	Nominal effective exchange rate of the US Dollar, based on a broad basket of trade partner countries. Annual average of monthly data or year-end monthly data. Data sources: BIS

List of countries (41)			
Brazil	Germany	Netherlands	Sweden
Canada	Greece	New Zealand	Switzerland
Chile	Hungary	Norway	Turkey
China	Ireland	Peru	United Kingdom
Colombia	Italy	Poland	United States
Costa Rica	Japan	Portugal	

Variable	Obs	Mean	SD	Min	Max
PPP	902	29,952.690	16,047.960	2564.071	97,864.200
ΔPPP	861	545.247	984.762	−5801.609	11,919.720
Invest	902	23.586	5.126	9.819	47.686
Industry	887	26.780	6.011	10.671	47.559
ΔIndustry	846	−0.187	1.112	−6.005	13.116
Globalgrowth	902	2.955	1.297	−1.734	4.448

The descriptive statistics of the variables in first difference (Δ) are also reported for non-stationary variables

Appendix C: Unit root analysis

We perform three main panel unit root tests to ensure that all the variables included are stationary: the W *t*-bar test of Im et al. (2003) with the W_IPS statistic, the Fisher-type test of Maddala and Wu (1999) with the P-MW statistic and the *Z* test of Choi (2001) with Z_CHOI statistic. We run these three tests on two specifications: (1) series only with a constant; (2) series with both a constant and trend. Our rules of thumb are the following: we conclude with stationarity (or non-stationarity) if more than three of six statistics reject (don't reject) the null hypothesis of unit root; we conclude with trend stationarity if more than one test statistics out of three show stationarity with the specification of both constant and

Variable	W_IPS		P_MW		Z_CHOI		Decision
	Constant	Constant and trend	Constant	Constant and trend	Constant	Constant and trend	
CorpDebt	1.73162	0.79629	72.0376	83.2772	1.81649	1.43835	Non-stat.
IFCE	−3.83248***	−3.13355***	133.806***	142.369***	−3.54595***	−4.45349***	Stationary
Growth	−12.0654***	−9.63171***	297.905***	239.182***	−11.5073***	−8.93756***	Stationary
PPP	1.97683	0.61966	83.1302	72.6696	2.03109	0.96003	Non-stat.
Invest	−	−4.97668***	128.441***	153.407***	−	−	Stationary

Time series unit root tests	LM (KPSS)		MZa (Ng–Perron)		MZt (Ng–Perron)		
	Constant	Constant and trend	Constant	Constant and trend	Constant	Constant and trend	
Globalgrowth	0.163079		−11.0561**		−2.35112**		Stationary
G3Rate		0.056020		−8.40132		−2.00595	Non-stat.
USTIPS		0.112803		−9.60162		−2.10256	Non-stat.
USDNEER	0.105109		−1.58485		−0.65211		Non-stat.
Expected USD		0.221598**		−22.9252**		−	Stationary

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