The Financing of Local Government in China
Stimulus Loan Wanes and Shadow Banking Waxes

by Zhuo Chen, Zhiguo He and Chun Liu

Discussion by

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1) What the paper does

- Mini boom on china (local) debt

- Contributes to our understanding of “what the heck is going on in Chinas local government finances”

- Provides date and extensive institutional background on the stimulus, on LGFVs, shadow banking instruments, municipal corporate bonds

- Points to another angle to “the long shadow of China's fiscal expansion”(Bai et al. 2016), i.e. the 2009 fiscal stimulus

- By focusing on the liability side, specifically the structure of liabilities

- Useful and well written
2) Why do we care about the government financing in China?

- Because the 2009 stimulus was massive and because since then China’s growth performance was not...
2) Why do we care about the government financing in China?

- Even when compared to the EU or US… (relative scale)

Figure 1. Real GDP Growth, 2000–16

<table>
<thead>
<tr>
<th>Year</th>
<th>Percent</th>
<th>United States (left axis)</th>
<th>China (right axis)</th>
<th>European Union (left axis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
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</table>

Source: Federal Reserve Economic Data; Chang and others (2016).

a. Real GDP growth is measured as the percent change over the preceding quarter, seasonally adjusted, at annual rates.

2) Why do we care about local financing in China?

- ... because it was massive
- because it had a long (and shady) tail
- because the growth trend afterwards declined
- because there might be a causal connection
- i.e. misallocation of resources
- White elephants

2) Why do we care about local government financing in China?

- Because they are large and in transparent..
  From shadow banks and off balance

2) Why do we care about local government financing in China?

- ... and may create problem of financial stability?
- Risk of the borrower and of the financial intermediary?
- Who bears the ultimate risk?
- Can there be a run?
- Central government guarantees?
- Debt crisis, currency crises, capital outflows.

3) Back to, What the paper does:

- “bank loans from the 2009 stimulus to local governments where replaced by MCBs”

- “the refinancing need also stimulated trust loan growth”

- “this modernized the financial market in China”

- Provide data on the liability side of local government balance sheet, bank loans, MCB, WMP, trust loans

- Collected from multiple sources, instrument level, entity level, speeches, “estimated”
3) Back to, What the paper does:

- Drop 7 obs.
- Go to panel, with fixed effects
- with controls for borrower characteristics
- endogeneity, “abnormal”

**Panel A: 2009 bank loan and 2012-2015 MCB issuance, regional**

<table>
<thead>
<tr>
<th></th>
<th>(1) MCB_{2012}</th>
<th>(2) MCB_{2013}</th>
<th>(3) MCB_{2014}</th>
<th>(4) MCB_{2015}</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009 BL/GDP</td>
<td>0.11***</td>
<td>0.11**</td>
<td>0.22***</td>
<td>0.24**</td>
</tr>
<tr>
<td></td>
<td>(2.66)</td>
<td>(2.24)</td>
<td>(3.29)</td>
<td>(2.52)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.00</td>
<td>0.00</td>
<td>-0.01</td>
<td>-0.02</td>
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<tr>
<td></td>
<td>(-0.46)</td>
<td>(-0.47)</td>
<td>(-0.65)</td>
<td>(-0.99)</td>
</tr>
<tr>
<td>Observations</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Adj. R^2</td>
<td>0.42</td>
<td>0.35</td>
<td>0.44</td>
<td>0.46</td>
</tr>
</tbody>
</table>

**Panel B: 2009 bank loan and 2012-2015 MCB issuance, provincial**

<table>
<thead>
<tr>
<th></th>
<th>(1) MCB_{2012}</th>
<th>(2) MCB_{2013}</th>
<th>(3) MCB_{2014}</th>
<th>(4) MCB_{2015}</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009 BL/GDP</td>
<td>0.11</td>
<td>0.13***</td>
<td>0.20***</td>
<td>0.15*</td>
</tr>
<tr>
<td></td>
<td>(1.55)</td>
<td>(2.61)</td>
<td>(3.45)</td>
<td>(2.05)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.00</td>
<td>-0.01</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>(-0.15)</td>
<td>(-0.89)</td>
<td>(-0.50)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Observations</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Adj. R^2</td>
<td>0.10</td>
<td>0.31</td>
<td>0.34</td>
<td>0.17</td>
</tr>
</tbody>
</table>
Comment on message: Are bank loans really waning?

- Bank lending only wanes in relative terms, bonds still small and there is a lot of "other" local gov. financing.
- Economic magnitude of the rollover effect seems small (15 cent additional MCB issuance for repayment of stimulus loans).

Composition of Local gov. debt 2010, 2013 in bn of RMB, Source Table 1, Panel A and B, Data form NAO.
Is this big? From 0 to 1.5 % of GDP in 10 years?

Source figure 5 Panel A
Interpretation

- Convince the reader that this is a modernization of China’s financial system:

- Why are MCB better than bank loans?

- Any way you can say something about riskiness?

- Macro: fiscal deficit, debt level, defaults, sovereign ratings?
  Political: connectedness to gov., to lender
  Instrument level: spreads, volatility?
  Intermediary: (e.g. LGFV, WMP) rating?

Source: See FT March 9 2017, https://www.ft.com/content/eef2e2f8-0383-11e7-ace0-1ce02ef0def9
From bank based

Assets of the financial system, end-2008 (% GDP)

- Big four banks 96%
- "Other" (informal) 9%
- Other finance 4%
- Pension 3%
- Asset/WMP 14%
- Securities 8%
- Insurance 11%
- Trust 3%

Other banks 100%

TOTAL ASSETS 248% of GDP

Source: Anderson (2017) Emerging Market Advisors
To less so ..

Assets of the financial system, end-June 2016 (% GDP)

- Big four banks 109%
- "Other" (informal) 11%
- Other finance 14%
- Pension 8%
- Asset/WMP 46%
- Securities 26%
- Insurance 20%
- Trust 24%

Other banks 185%

TOTAL ASSETS 441% of GDP

Source: Anderson (2017) Emerging Market Advisors
Assets of the financial system, end-2020 (% GDP)

- Big four banks 105%
- Other banks 254%
- Other finance 27%
- Pension 24%
- Asset/WMP 106%
- Securities 58%
- Insurance 32%
- Trust 41%

TOTAL ASSETS 650% of GDP

Source: Anderson (2017) Emerging Market Advisors
- Clearly more diverse
- But is it more stable?
- What is modern?
Thank you very much for your attention
Smaller comments

- Get to the core, i.e. the cross section faster. The initial sections raise lot of questions about the data and how it is estimated.

- Section 3.2.2. figure 4 is not ideal as a first evidence, since it most of the “action” is in the part that is not so reliable (“estimated”)

- Section 3.3. uses different data than 3.2.2. ? Confusing.

- Drop the region regressions (7 observations)

Source: FT March 9 2017, https://www.ft.com/content/eef2e2f8-0383-11e7-ace0-1ce02ef0def9
Misallocation of Credit is possibly not limited to LFVs
Source: Obstfeld, comments on Bai et al 2016

Figure 4. Domestic Credit in China, 2008–15

Percent of GDP

- Local financing vehicles’ borrowing
- Private sector credit, including external debt and equity

Adjusted total social financing, including external debt

Sources: CEIC Data; IMF staff estimates.
Multiple reasons for debt increase

Panel B: Local government debt balance as of June 30, 2013

<table>
<thead>
<tr>
<th>Contingent Liability</th>
<th>Full Obligation</th>
<th>Guaranteed Liability</th>
<th>Contingent Bailout Liability</th>
<th>Total Debt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank loan</td>
<td>5,525</td>
<td>1,909</td>
<td>2,685</td>
<td>10,119</td>
</tr>
<tr>
<td>Build &amp; Transfer</td>
<td>1,215</td>
<td>47</td>
<td>215</td>
<td>1,476</td>
</tr>
<tr>
<td>Bond</td>
<td>1,166</td>
<td>167</td>
<td>512</td>
<td>1,846</td>
</tr>
<tr>
<td>MuniBond</td>
<td>615</td>
<td>49</td>
<td>0</td>
<td>664</td>
</tr>
<tr>
<td>Corporate bond (MCB)</td>
<td>459</td>
<td>81</td>
<td>343</td>
<td>883</td>
</tr>
<tr>
<td>Mid-term note (MCB)</td>
<td>58</td>
<td>34</td>
<td>102</td>
<td>194</td>
</tr>
<tr>
<td>Short-term bill (MCB)</td>
<td>12</td>
<td>1</td>
<td>22</td>
<td>36</td>
</tr>
<tr>
<td>Accounts payable</td>
<td>778</td>
<td>9</td>
<td>70</td>
<td>857</td>
</tr>
<tr>
<td>Trust</td>
<td>762</td>
<td>253</td>
<td>410</td>
<td>1,425</td>
</tr>
<tr>
<td>Other entity and</td>
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<td></td>
<td></td>
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<tr>
<td>individual borrowing</td>
<td>668</td>
<td>55</td>
<td>116</td>
<td>839</td>
</tr>
<tr>
<td>Construction loan</td>
<td>327</td>
<td>1</td>
<td>48</td>
<td>376</td>
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<tr>
<td>Other financial</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>institution borrowing</td>
<td>200</td>
<td>31</td>
<td>106</td>
<td>337</td>
</tr>
<tr>
<td>Fiscal on-lending</td>
<td>133</td>
<td>171</td>
<td>0</td>
<td>303</td>
</tr>
<tr>
<td>Capital lease</td>
<td>75</td>
<td>19</td>
<td>137</td>
<td>232</td>
</tr>
<tr>
<td>Other fund raising</td>
<td>37</td>
<td>4</td>
<td>39</td>
<td>80</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10,886</strong></td>
<td><strong>2,666</strong></td>
<td><strong>4,339</strong></td>
<td><strong>17,891</strong></td>
</tr>
</tbody>
</table>

Source Table 1, Panel B, Data form NAO