Globalizing Chinese Energy Finance through Policy Banks

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10/24/2016
1. Research Question: How much has China globalized its energy finance and how has China globalized its energy finance?

1. Central finding: China has emerged to become the largest provider of development finance for energy in a short span of time primarily through its twin policy banks.
The globalization of Chinese energy finance

- Chinese global energy finance
- Foreign investment by Chinese energy companies
- Chinese development finance for energy
- Green-field Investment
- M&As
## The globalization of Chinese energy investment

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Greenfield</td>
<td>$14,556</td>
<td>$31,268</td>
<td>$45,824</td>
<td>$1,281,730</td>
<td>3.57%</td>
</tr>
<tr>
<td>M&amp;A</td>
<td>$31,922</td>
<td>$180,220</td>
<td>$212,228</td>
<td>$5,999,193</td>
<td>3.54%</td>
</tr>
<tr>
<td>Total</td>
<td>$46,478</td>
<td>$211,488</td>
<td>$257,966</td>
<td>$7,280,923</td>
<td>3.54%</td>
</tr>
</tbody>
</table>

Source: author's calculations based on data drawn from the FDintelligence, a greenfield investment database, and the DealLogic, a M&A database.
Distribution of Chinese energy investment

GREENFIELD INVESTMENT

- Asia Emerging: 39%
- Middle East and North Africa: 37%
- Central Asia: 16%
- Latin America: 3%
- Sub-Saharan Africa: 3%
- Central Eastern Europe: 1%
- North America: 1%
- Asia Industrial: 0%

MERGERS AND ACQUISITIONS

- North America: 25%
- Latin America: 15%
- Sub-Saharan Africa: 6%
- Central Eastern Europe: 3%
- Industrial Europe: 23%
- Asia Emerging: 9%
- Asia Industrial: 17%

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## Financing Chinese global energy investment (2002-2012)

<table>
<thead>
<tr>
<th></th>
<th>Amount ($ million)</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDB</td>
<td>92,860</td>
<td>64.3%</td>
</tr>
<tr>
<td>CHEXIM</td>
<td>34,151</td>
<td>23.7%</td>
</tr>
<tr>
<td>BOC</td>
<td>12,310</td>
<td>8.5%</td>
</tr>
<tr>
<td>ICBC</td>
<td>770</td>
<td>0.5%</td>
</tr>
<tr>
<td>CCB</td>
<td>475</td>
<td>0.3%</td>
</tr>
<tr>
<td>Multiple</td>
<td>3,800</td>
<td>2.6%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>144,366</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

Source: Gallagher and Irvin 2014
The globalization of Chinese development finance for energy

Global energy finance, 2007-2014 (Million$)

<table>
<thead>
<tr>
<th>Bank</th>
<th>Amount (Million U.S. Dollar)</th>
<th>Annual Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>World Bank</td>
<td>72,219</td>
<td>10,317</td>
</tr>
<tr>
<td>Asian Development Bank (ADB)</td>
<td>25,410</td>
<td>3,630</td>
</tr>
<tr>
<td>Inter-American Development Bank (IADB)</td>
<td>9,631</td>
<td>1,376</td>
</tr>
<tr>
<td>African Development Bank (ADB)</td>
<td>11,676</td>
<td>1,668</td>
</tr>
<tr>
<td>MDBs Total</td>
<td>118,936</td>
<td>16,991</td>
</tr>
<tr>
<td>CDB and CHEXIM</td>
<td>117,590</td>
<td>16,799</td>
</tr>
</tbody>
</table>

Geographical distribution of Chinese and World Bank energy finance, 2005-2014 (Million$)

<table>
<thead>
<tr>
<th>Region</th>
<th>CDB and CHEXIM</th>
<th>World Bank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>17,883</td>
<td>18,063</td>
</tr>
<tr>
<td>Middle East &amp; North Africa</td>
<td>366</td>
<td>5,121</td>
</tr>
<tr>
<td>South Asia</td>
<td>17,513</td>
<td>14,107</td>
</tr>
<tr>
<td>Latin America and Caribbean</td>
<td>33,232</td>
<td>9,672</td>
</tr>
<tr>
<td>Europe &amp; Central Asia</td>
<td>42,889</td>
<td>17,317</td>
</tr>
<tr>
<td>East Asia &amp; Pacific</td>
<td>15,907</td>
<td>13,565</td>
</tr>
<tr>
<td>Total</td>
<td>127,789</td>
<td>77,665</td>
</tr>
</tbody>
</table>

Source: Gallagher and Irwin, 2015; Gallagher, Kamal, and Wang, 2016; Brautigam 2015
The role of the state in integrating energy and finance
Case study: the rise of CDB in global energy finance

CDB’s foreign exchange loan balances (unit: US$ billion)

Source: CDB Yearbooks and the CDB Research Academy
Where does the CDB source its funding?

CDB’s funding in 2014

- Financial bonds, 70.50%
- Deposits, 23.70%
- Borrowing, 5.20%
- Others, 0.60%

CDB bonds/total bonds issued in China

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>17.7%</td>
</tr>
<tr>
<td>2013</td>
<td>19.9%</td>
</tr>
<tr>
<td>2012</td>
<td>20.27%</td>
</tr>
<tr>
<td>2011</td>
<td>20.8%</td>
</tr>
<tr>
<td>2010</td>
<td>23.33%</td>
</tr>
<tr>
<td>2009</td>
<td>24.26%</td>
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</tbody>
</table>

Sources: CDB Yearbook 2015, Goldman Sachs 2015

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The role of state in mobilizing capital
Climate implications of Chinese global energy finance

Sector Composition (Green Field)

- Oil, Gas and Coal: 90%
- Solar and Wind: 9%
- Hydro: 1%

Sector composition (M&As)

- Oil and Gas: 80%
- Renewables: 5%
- Electric Power: 15%

Source: authors’ calculations based on the Fdintelligence (a greenfield database) and DealLogic (a M&A database)