Class 5: China’s Financial System 中国金融系统

Financial Markets, Spring 2021, SAIF

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China’s financial system is dominated by giant banks:
- Banks’ total assets-to-GDP: close to 300% in China and 80% in the US.
- Top four Chinese banks: each with total assets over $3T; JPMorgan at $2.74T.

The magnitude of bank loans dwarfs that of the credit market:
- Total bank loans at 157T CNY, including 98T extended to non-financial firms.
- By comparison, market-based credit extended to non-financial firms: 27T.
- Shadow banking, an extension of the banks, is estimated at 59T.

Banks capture most of the household savings and investments:
- Around 200T bank deposits, with 85T from residents.
- Wealth management product at 23T, managed by banks and their subsidiaries.
- By comparison, mutual funds are at 13T, including 8T money market funds.

Banks also have unparalleled presence in capital markets, holding 67% of the 64T interbank-traded bonds (China bond depository balance).
The Chinese Financial System 中国金融系统
Credit Extension in China

As of Feb. 2020:

- **Total Bank Loan** 总贷款存量: 156.65 万亿.
  - 居民贷款: 54.85T.
  - 非金融企业贷款: 97.73T.

- **Total Bond Market** 债市总存量: 100.40 万亿.
  - Policy Banks: 15.98T.
  - Central Government: 16.79T.
  - Local Government: 22.57T.
  - 信用债 Credit: 34.61T.
    - 金融债 Financial: 7.45T.
    - 城投债 Chengtou: 9.37T.
    - 非金融非城投企业: 17.84T.

- **Shadow Banking** 影子银行: 59 万亿 (estimated).
Total Increase: 5.15T. (previously estimated: 3.14T)
- New yuan loans: 2.85T.
- Corp bond issuance: 1T.
- Government bond: 636B.
中国银行体系

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The Presence of Banks in the Chinese and US Economies

### Chinese Banks, Assets to GDP (%)
- **Top 6 Commercial Banks**
- **Joint-Stock Commercial Banks**
- **City Commercial Banks**
- **Other Depository Institutions**

### US Banks, Assets to GDP (%)
- **All US Commercial Banks**
- **Top 25 Commercial Banks**

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The Presence of Capital Markets in the Chinese and US Economies

GDP in USD Trillion

- GDP US
- GDP China

Ratio of Stock to GDP (%)

- US (NYSE+NASDAQ+AMEX)
- China (SH+SZ)
- China (SH+SZ+HK+US)

Ratio of Bond to GDP (%)

- Bond US
- Bond China

Ratio of Mutual Fund to Stock + Bond (%)

- Mutual Fund US
- Mutual Fund China
## Assets of Top Commercial Banks in China

<table>
<thead>
<tr>
<th>Top US Banks in USD</th>
<th>Top Chinese Banks in CNY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  JPMorgan Chase</td>
<td>中国工商银行</td>
</tr>
<tr>
<td>2.74T</td>
<td>27.70T</td>
</tr>
<tr>
<td>2  Bank of America</td>
<td>中国建设银行</td>
</tr>
<tr>
<td>2.38T</td>
<td>23.22T</td>
</tr>
<tr>
<td>3  Citigroup</td>
<td>中国农业银行</td>
</tr>
<tr>
<td>1.96T</td>
<td>22.61T</td>
</tr>
<tr>
<td>4  Wells Fargo</td>
<td>中国银行</td>
</tr>
<tr>
<td>1.89T</td>
<td>21.27T</td>
</tr>
<tr>
<td>5  Goldman Sachs</td>
<td>交通银行</td>
</tr>
<tr>
<td>0.93T</td>
<td>9.53T</td>
</tr>
<tr>
<td>6  Morgan Stanley</td>
<td>中国邮政储蓄银行</td>
</tr>
<tr>
<td>0.88T</td>
<td>9.51T</td>
</tr>
</tbody>
</table>

Numbers are as of end 2018.
Liabilities of Banks in China

Chinese Banks, Liabilities to GDP (%)

- Top 6 Commercial Banks
- Joint-Stock Commercial Banks
- City Commercial Banks
- Other Depository Institutions

### Table: Chinese Banks Liabilities to GDP

<table>
<thead>
<tr>
<th>发行人</th>
<th>总负债(亿元)</th>
<th>发行人类型</th>
<th>最新报告期</th>
<th>城市</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 中国工商银行股份有限公司</td>
<td>253,546.5700</td>
<td>国有商业银行</td>
<td>2018-12-31</td>
<td>北京市</td>
</tr>
<tr>
<td>2 中国建设银行股份有限公司</td>
<td>212,310.9900</td>
<td>国有商业银行</td>
<td>2018-12-31</td>
<td>北京市</td>
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<tr>
<td>3 中国农业银行股份有限公司</td>
<td>209,346.8400</td>
<td>国有商业银行</td>
<td>2018-12-31</td>
<td>北京市</td>
</tr>
<tr>
<td>4 中国银行股份有限公司</td>
<td>195,418.7800</td>
<td>国有商业银行</td>
<td>2018-12-31</td>
<td>北京市</td>
</tr>
<tr>
<td>5 中国邮政储蓄银行股份有限公司</td>
<td>96,718.2700</td>
<td>国有商业银行</td>
<td>2019-12-31</td>
<td>北京市</td>
</tr>
<tr>
<td>6 交通银行股份有限公司</td>
<td>88,258.6300</td>
<td>国有商业银行</td>
<td>2018-12-31</td>
<td>上海市</td>
</tr>
<tr>
<td>7 招商银行股份有限公司</td>
<td>67,995.3300</td>
<td>股份制商业银行</td>
<td>2019-12-31</td>
<td>深圳市</td>
</tr>
<tr>
<td>8 兴业银行股份有限公司</td>
<td>62,390.7300</td>
<td>股份制商业银行</td>
<td>2018-12-31</td>
<td>福州市</td>
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<tr>
<td>9 上海浦东发展银行股份有限公司</td>
<td>58,112.2600</td>
<td>股份制商业银行</td>
<td>2018-12-31</td>
<td>上海市</td>
</tr>
<tr>
<td>10 中信银行股份有限公司</td>
<td>56,136.2800</td>
<td>股份制商业银行</td>
<td>2018-12-31</td>
<td>北京市</td>
</tr>
<tr>
<td>11 中国民生银行股份有限公司</td>
<td>55,638.2100</td>
<td>股份制商业银行</td>
<td>2018-12-31</td>
<td>北京市</td>
</tr>
<tr>
<td>12 中国光大银行股份有限公司</td>
<td>40,348.5900</td>
<td>股份制商业银行</td>
<td>2018-12-31</td>
<td>北京市</td>
</tr>
<tr>
<td>13 平安银行股份有限公司</td>
<td>36,260.8700</td>
<td>股份制商业银行</td>
<td>2019-12-31</td>
<td>深圳市</td>
</tr>
<tr>
<td>14 华夏银行股份有限公司</td>
<td>24,618.6500</td>
<td>股份制商业银行</td>
<td>2018-12-31</td>
<td>北京市</td>
</tr>
<tr>
<td>15 北京银行股份有限公司</td>
<td>23,787.3100</td>
<td>城市商业银行</td>
<td>2018-12-31</td>
<td>北京市</td>
</tr>
<tr>
<td>16 广发银行股份有限公司</td>
<td>22,023.4800</td>
<td>股份制商业银行</td>
<td>2018-12-31</td>
<td>广州市</td>
</tr>
<tr>
<td>17 上海银行股份有限公司</td>
<td>18,660.0379</td>
<td>城市商业银行</td>
<td>2018-12-31</td>
<td>上海市</td>
</tr>
<tr>
<td>18 江苏银行股份有限公司</td>
<td>18,013.1829</td>
<td>城市商业银行</td>
<td>2018-12-31</td>
<td>南京市</td>
</tr>
<tr>
<td>19 浙商银行股份有限公司</td>
<td>15,442.4621</td>
<td>股份制商业银行</td>
<td>2018-12-31</td>
<td>杭州市</td>
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<tr>
<td>20 恒丰银行股份有限公司</td>
<td>12,592.0000</td>
<td>股份制商业银行</td>
<td>2017-12-31</td>
<td>济南市</td>
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</tbody>
</table>

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Capital Adequacy

**Chinese Banks, Equity to Assets (%)**
- Top 6 Commercial Banks
- Joint-Stock Commercial Banks
- City Commercial Banks

**US Banks, Equity to Assets (%)**
- US Commercial Banks
- Top 25 Commercial Banks
Core Drivers of Assets and Liabilities, JPM vs ICBC

### Loan to Assets (%)

- **JPM**
- **ICBC**
- JPM/Bank One Merged

### Securities to Assets (%)

- **JPM**
- **ICBC**
- JPM/Bank One Merged

### Deposits to Liabilities (%)

- **JPM**
- **ICBC**
- JPM/Bank One Merged

### Debt to Liabilities (%)

- **JPM**
- **ICBC**
- JPM/Bank One Merged

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<table>
<thead>
<tr>
<th></th>
<th>JPM</th>
<th>ICBC</th>
<th>JPM/Bank One Merged</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets in USD</td>
<td>2.69 trln</td>
<td>4.32 trln</td>
<td>30.1 trln</td>
</tr>
<tr>
<td>Loans in USD</td>
<td>0.95 trln</td>
<td>2.34 trln</td>
<td>16.3 trln</td>
</tr>
<tr>
<td>Liabilities in USD</td>
<td>2.42 trln</td>
<td>3.94 trln</td>
<td>27.4 trln</td>
</tr>
<tr>
<td>Deposits in USD</td>
<td>1.56 trln</td>
<td>3.30 trln</td>
<td>23.0 trln</td>
</tr>
</tbody>
</table>

As of end 2019
Core Drivers of Assets and Liabilities, US Banks

### US Banks, Loan to Assets (%)

- **US Commercial Banks**
- **Top 25 Commercial Banks**

### US Banks, Securities to Assets (%)

- **US Commercial Banks**
- **Top 25 Commercial Banks**

### US Banks, Deposits to Liabilities (%)

- **US Commercial Banks**
- **Top 25 Commercial Banks**

### US Banks, Debt to Liabilities (%)

- **US Commercial Banks**
- **Top 25 Commercial Banks**

<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>Top25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets</td>
<td>15.73</td>
<td>10.33</td>
</tr>
<tr>
<td>Loans</td>
<td>9.32</td>
<td>5.58</td>
</tr>
<tr>
<td>Liabilities</td>
<td>13.72</td>
<td>8.99</td>
</tr>
<tr>
<td>Deposits</td>
<td>12.30</td>
<td>8.00</td>
</tr>
</tbody>
</table>

as of 2020/2

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Class 5: China’s Financial System 中国金融系统

Jun Pan
Core Drivers of Assets and Liabilities, Chinese vs US Banks

### Loan to Assets (%)
- **US Commercial Banks**
- **CN Financial Institutions**

### Securities to Assets (%)
- **US Commercial Banks**
- **CN Financial Institutions**

### Deposits to Liabilities (%)
- **US Commercial Banks**
- **CN Financial Institutions**

### Debt to Liabilities (%)
- **US Commercial Banks**
- **CN Financial Institutions**

<table>
<thead>
<tr>
<th></th>
<th>US (USD)</th>
<th>CN (USD)</th>
<th>CN (CNY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets</td>
<td>15.73</td>
<td>41.18</td>
<td>288.3</td>
</tr>
<tr>
<td>Loans</td>
<td>9.32</td>
<td>23.30</td>
<td>163.1</td>
</tr>
<tr>
<td>Liabilities</td>
<td>13.72</td>
<td>37.60</td>
<td>263.2</td>
</tr>
<tr>
<td>Deposits</td>
<td>12.30</td>
<td>28.91</td>
<td>202.3</td>
</tr>
</tbody>
</table>

as of 2020/2
Nonperforming Loans in China

- China, Q4 2019 (latest):
  - NPL: 2.41T CNY.
  - NPL ratio: 1.83%.

- US NPL ratios:
  - 0.86% Q3 2019 (latest).
  - 4.99% Q1 2010.
As of Apr 2020:
- ICBC: 0.73.
- CCB: 0.68.
- BOC: 0.48.
- Citic: 0.39.
- Merchant: 1.40.
- Ping An: 0.91.
- JPM: 1.35.
- Goldman Sachs: 0.81.
- Morgan Stanely: 0.90.
Shadow Banking in China

- **Why?** State-owned banks facing increasing competitions:
  - Interest rate liberalization.
  - Private-owned banks.

- **How?** Regulatory arbitrage by moving capital off balance sheet to avoid:
  - Regulatory requirements.
  - Mechanisms includes:

- **From where?** Funding sources:
  - Savings diverted from bank deposits to wealth management products.
  - 同业负债（含同业存单）.

- **To where?** Assets on:
  - Small-medium enterprises.
  - 受监管限制行业企业: 房地产，地方政府融资平台，两高一剩行业.
  - 权益、非标等资产.
## Estimates of Shadow Banking Size by Moody’s

<table>
<thead>
<tr>
<th>Credit Intermediation Products</th>
<th>End.2019Q3 (RMB trillion)</th>
<th>As % of total banking assets (%)</th>
<th>End.2018 (RMB trillion)</th>
<th>As % of total banking assets (%)</th>
<th>End.2017 (RMB trillion)</th>
<th>As % of total banking assets (%)</th>
<th>End.2016 (RMB trillion)</th>
<th>As % of total banking assets (%)</th>
<th>End.2015 (RMB trillion)</th>
<th>As % of total banking assets (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrusted loans</td>
<td>11.7</td>
<td>4.2</td>
<td>12.4</td>
<td>4.7</td>
<td>14.0</td>
<td>5.7</td>
<td>13.2</td>
<td>5.8</td>
<td>10.9</td>
<td>5.6</td>
</tr>
<tr>
<td>Trust loans</td>
<td>7.7</td>
<td>2.8</td>
<td>7.9</td>
<td>3.0</td>
<td>8.5</td>
<td>3.5</td>
<td>6.3</td>
<td>2.8</td>
<td>5.4</td>
<td>2.8</td>
</tr>
<tr>
<td>Undiscounted bankers’ acceptances</td>
<td>3.3</td>
<td>1.2</td>
<td>3.8</td>
<td>1.5</td>
<td>4.4</td>
<td>1.8</td>
<td>3.9</td>
<td>1.7</td>
<td>5.9</td>
<td>3.0</td>
</tr>
<tr>
<td>Assets funded by WMPs/AMPs</td>
<td>23.4</td>
<td>8.4</td>
<td>24.4</td>
<td>9.3</td>
<td>26.5</td>
<td>10.8</td>
<td>30.1</td>
<td>13.3</td>
<td>21.4</td>
<td>11.1</td>
</tr>
<tr>
<td>Banks’ off-balance sheet</td>
<td>16.1</td>
<td>5.8</td>
<td>15.8</td>
<td>6.1</td>
<td>15.2</td>
<td>6.2</td>
<td>17.1</td>
<td>7.5</td>
<td>12.4</td>
<td>6.4</td>
</tr>
<tr>
<td>Securities firms and funds</td>
<td>7.3</td>
<td>2.6</td>
<td>8.6</td>
<td>3.3</td>
<td>11.3</td>
<td>4.6</td>
<td>13.0</td>
<td>5.8</td>
<td>9.0</td>
<td>4.6</td>
</tr>
<tr>
<td>Loans by finance companies</td>
<td>3.3</td>
<td>1.2</td>
<td>3.2</td>
<td>1.2</td>
<td>3.1</td>
<td>1.3</td>
<td>3.0</td>
<td>1.3</td>
<td>2.6</td>
<td>1.3</td>
</tr>
<tr>
<td>Informal lending*</td>
<td>3.4</td>
<td>1.2</td>
<td>3.4</td>
<td>1.3</td>
<td>3.4</td>
<td>1.4</td>
<td>3.4</td>
<td>1.5</td>
<td>3.4</td>
<td>1.7</td>
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<tr>
<td>Others†</td>
<td>6.5</td>
<td>2.3</td>
<td>6.3</td>
<td>2.4</td>
<td>5.8</td>
<td>2.3</td>
<td>4.6</td>
<td>2.0</td>
<td>3.8</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>59.2</strong></td>
<td><strong>21.4</strong></td>
<td><strong>61.3</strong></td>
<td><strong>23.5</strong></td>
<td><strong>65.6</strong></td>
<td><strong>26.7</strong></td>
<td><strong>64.5</strong></td>
<td><strong>28.5</strong></td>
<td><strong>53.3</strong></td>
<td><strong>27.5</strong></td>
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