

**Study of Non-Performing Loans in China**

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requirements for the Degree of Master of Science in  
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## **ABSTRACT**

This thesis aims to provide an overview of the history, market landscape, and trend of investment in China's non-performing loans (NPLs). It starts by comparing the definitions of non-performing loans by ECB, IMF, and CBRC. The focus in this section is on the change and process of NPL definition in China. Next, this thesis studies the historical trend of historical NPL balances and NPL ratios across industries and geographic locations. It then pictures the market landscape in China to introduce the market structure and participants followed by the handling and workout strategies of NPLs used in China. Lastly, it analyzes the pros and cons of investing in the China NPL market.

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This thesis is dedicated to my parents. Thanks for their love and unwavering support throughout my life.

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## Table of Contents

|          |   |           |
|----------|---|-----------|
| <b>1</b> | <b><i>Introduction</i></b> .....  | <b>8</b>  |
| <b>2</b> | <b><i>Definition of Non-Performing Loans</i></b> .....                        | <b>9</b>  |
| 2.1      | <b>Official Definition of Non-Performing Loans by ECB</b> .....               | <b>9</b>  |
| 2.2      | <b>Official Definition of Non-Performing Loans by IMF</b> .....               | <b>9</b>  |
| 2.3      | <b>Definition of Non-Performing Loans in China</b> .....                      | <b>10</b> |
| 2.3.1    | Definition of non-performing loans before reform .....                        | 10        |
| 2.3.2    | Set up of state-owned asset management corporations (AMCs).....               | 11        |
| 2.3.3    | Roll out and progress of risk-based loan classification.....                  | 13        |
| <b>3</b> | <b><i>Analysis of Trends of Non-performing Loans in China</i></b> .....       | <b>16</b> |
| 3.1      | <b>Decrease in NPL Ratio</b> .....  | <b>16</b> |
| 3.2      | <b>Increase in NPL Balance</b> .....  | <b>18</b> |
| 3.3      | <b>Change in NPL balance and ratio by industry</b> .....                      | <b>20</b> |
| 3.4      | <b>Change in non-performing loan by geographic locations</b> .....            | <b>26</b> |
| <b>4</b> | <b><i>Non-Performing Loan Market Landscape</i></b> .....                      | <b>30</b> |
| 4.1      | <b>Primary Market</b> .....   | <b>32</b> |
| 4.2      | <b>Secondary Market</b> .....   | <b>33</b> |
| 4.3      | <b>Methods for foreign investors to participate in China NPL market</b> ..... | <b>35</b> |
| <b>5</b> | <b><i>Handling of Non-Performing Loans</i></b> .....                          | <b>36</b> |
| 5.1      | <b>Passive</b> .....  | <b>37</b> |
| 5.1.1    | Write – off .....   | 37        |
| 5.1.2    | Hold.....   | 37        |
| 5.2      | <b>Disposition methods for debts</b> .....                                    | <b>37</b> |
| 5.2.1    | Sale / Resale.....  | 37        |
| 5.2.2    | Repackage.....  | 38        |
| 5.2.3    | Collection .....  | 38        |
| 5.2.4    | Legal Actions.....  | 39        |
| 5.2.5    | Credit Restructuring.....   | 39        |
| 5.3      | <b>Disposition methods for assets</b> .....                                   | <b>40</b> |
| 5.3.1    | Asset replacement .....   | 40        |
| 5.3.2    | Pay off with assets .....   | 40        |
| 5.3.3    | Auction of collateral .....   | 40        |
| 5.3.4    | Asset restructure .....   | 40        |
| 5.4      | <b>Disposition methods of equity</b> .....                                    | <b>41</b> |
| 5.4.1    | Debt-to-Equity Swap .....   | 41        |
| 5.4.2    | Securitization .....  | 41        |
| <b>6</b> | <b><i>Pros and Cons of Investing in China NPL market</i></b> .....            | <b>42</b> |
| <b>7</b> | <b><i>Conclusion</i></b> .....  | <b>44</b> |

# 1 Introduction

After the Asia financial crisis in 1997, the Chinese government implemented a series of reforms to strengthen the financial system. Within those, setting up state-owned asset management corporations (AMC) to take over and resolve non-performing loans (NPL) from the commercial banks was a significant step.

For the past twenty years, the balance of non-performing loans as continued to grow in China. The size estimated is around \$1.5 trillion for 2019, with \$295 billion held by banks.<sup>1&2</sup> With such an enormous market size, only \$56 billion of NPLs were traded in the secondary market during 2018, and only 4% of the purchases were made by foreign investors.<sup>3</sup>

To provide a better understanding of the China NPL market, I choose to structure the paper, starting with a comparison of the definition of NPL by ECB, IMF, and China. The thesis then presents the analysis of trends and changes in NPL ratio and NPL balance across industries and geographic locations. After this, it discusses how NPLs are managed and recovered in China, and how local and foreign investors can participate in the China NPL market. Lastly, it addresses the pros and cons of investing in China NPLs with recent trends.

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<sup>1</sup> “The Chinese NPL Market in 2020 - PwC.” PwC China, 2020, [www.pwccn.com/en/deals/publications/the-chinese-npl-market-in-2020.pdf](http://www.pwccn.com/en/deals/publications/the-chinese-npl-market-in-2020.pdf).

<sup>2 3</sup> “Deleveraging Asia.” Deloitte, Aug. 2019, [www2.deloitte.com/content/dam/Deloitte/uk/Documents/corporate-finance/deloitte-uk-deleveraging-asia-2019.pdf](http://www2.deloitte.com/content/dam/Deloitte/uk/Documents/corporate-finance/deloitte-uk-deleveraging-asia-2019.pdf).



## **2 Definition of Non-Performing Loans**

To provide a better understanding of non-performing loans in China, it is essential to take a look at the definition and classification of non-performing loans used worldwide and be mindful of any differences when we draw comparisons of non-performing loans across countries.

### **2.1 Official Definition of Non-Performing Loans by ECB**

The European Central Bank (ECB) released guidance to banks on non-performing loans in March 2017. The definition given by this guidance refers to non-performing loans as:

Loans other than held for trading that satisfy either or both of the following criteria:

- (a) material loans which are more than 90 days past-due;
- (b) the debtor is assessed as unlikely to pay its credit obligations in full without realisation of collateral, regardless of the existence of any past-due amount or of the number of days past due.

Non-performing loans include defaulted and impaired loans.<sup>4</sup>

### **2.2 Official Definition of Non-Performing Loans by IMF**

The definition of non-performing loan given in the IMF's Compilation 2004 Guide on Financial Soundness Indicators 2004 is:

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<sup>4</sup> "Guidance to Banks on Non-Performing Loans." European Central Bank, 2017, [www.bankingsupervision.europa.eu/ecb/pub/pdf/guidance\\_on\\_npl.en.pdf](http://www.bankingsupervision.europa.eu/ecb/pub/pdf/guidance_on_npl.en.pdf).

A loan is non-performing when payments of interest and/or principal are past due by 90 days or more, or interest payments equal to 90 days or more have been capitalized, refinanced, or delayed by agreement, or payments are less than 90 days overdue, but there are other good reasons—such as a debtor filing for bankruptcy—to doubt that payments will be made in full. After a loan is classified as nonperforming, it (and, possibly, replacement loan(s)) should remain classified as such until written off or payments of interest and/or principal are received.<sup>5</sup>

## **2.3 Definition of Non-Performing Loans in China**

### **2.3.1 Definition of non-performing loans before reform**

China maintained a centrally planned economy before 1979. The issuance of loans to state-owned enterprises was a part of central economic planning. Loans were categorized into four groups as “pass loan, past-due loan, idle loan, and loss loan ” according to guidance issued by the Ministry of Finance in 1988.<sup>6</sup> The latter three categories were considered as non-performing loans and jointly called “one overdue, two idle.” Banks were required to keep only 1% of the total loan amount as a loan loss reserve.<sup>7</sup>

After 1978, a series of reforms in the banking and financial system started in China. In 1993, specialists from the World Bank introduced the five-level risk-based loan classification through a project with the People’s Bank of China (PBOC). Under the impact of the Asia

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<sup>5</sup> Statistics Department International Monetary Fund. “The Treatment of Nonperforming Loans.” INTERNATIONAL MONETARY FUND, June 2005, [www.imf.org/external/pubs/ft/bop/2005/05-29.pdf](http://www.imf.org/external/pubs/ft/bop/2005/05-29.pdf).

<sup>6</sup> Li, Lei. “什么是不良资产 [What Is NPL].” People, 4 Jan. 2006, [www.people.com.cn/GB/paper68/16561/1459027.html](http://www.people.com.cn/GB/paper68/16561/1459027.html).

<sup>7</sup> Luo, Ping, and Junmei Wu. Banking Regulation and Supervision Theory and Practice. 1st ed., China Financial and Economic Publishing House, 2015.

[https://books.google.com/books?id=ghyADwAAQBAJ&pg=PT311&lpg=PT311&dq=1993年颁布的《金融保险企业财务制度》&source=bl&ots=XRLNeD\\_e1\\_&sig=ACfU3U3MqLhUY1pK4AY15yIsUwhSvuyDcA&hl=en&sa=X&ved=2ahUKewiklt3CnvjoAhXDgnIEHUW2C9cQ6AEwAXoECAoQAQ#v=onepage&q=1993年颁布的《金融保险企业财务制度》&f=false](https://books.google.com/books?id=ghyADwAAQBAJ&pg=PT311&lpg=PT311&dq=1993年颁布的《金融保险企业财务制度》&source=bl&ots=XRLNeD_e1_&sig=ACfU3U3MqLhUY1pK4AY15yIsUwhSvuyDcA&hl=en&sa=X&ved=2ahUKewiklt3CnvjoAhXDgnIEHUW2C9cQ6AEwAXoECAoQAQ#v=onepage&q=1993年颁布的《金融保险企业财务制度》&f=false)

financial crisis, the main focus of the China National Financial Work Conference in 1997 was to strengthen the financial system against instability. The PBOC thus suggested the implementation of the new five-level risk-based loan classification. The five-level risk classification was first implemented as a trial in Guangdong province in 1998. In July 1999, the PBOC released the “Guidance on Risk-based Loan Classification (Trial implementation)” and planned to roll out the new guidance nationwide. However, the implementation of the new classification ran into problems. Under the new guidance, the amount of loans classified as non-performing was 20% higher than before.<sup>8</sup> This result caused a dispute within the banking system. Many argued that the five-level risk-based loan classification was not suitable for the Chinese economy at the time. As a result, the new five-level risk-based loan classification was only used as a statistic reference.<sup>9</sup>

### 2.3.2 Set up of state-owned asset management corporations (AMCs)

During the same period, we saw another effort from the government to help with the reform of the banking system, especially with the handling and disposal of non-performing assets. To strengthen the prudence of the financial system and to promote the reform of state-owned enterprises, the government decided to set up state-owned asset management corporations to take over the non-performing loans from state-owned commercial banks. China Cinda Asset Management Corporation (Cinda), was set up in April 1999 as the first state-owned asset management corporation.

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<sup>8</sup> <sup>9</sup> Luo, Ping, and Junmei Wu. *Banking Regulation and Supervision Theory and Practice*. 1st ed., China Financial and Economic Publishing House, 2015. [https://books.google.com/books?id=ghyADwAAQBAJ&pg=PT311&lpg=PT311&dq=1993年颁布的《金融保险企业财务制度》&source=bl&ots=XRLNeD\\_e1\\_&sig=ACfU3U3MqLhUY1pK4AY15yIsUwhSvuyDcA&hl=en&sa=X&ved=2ahUKEwikl3CnvjoAhXDgnIEHUW2C9cQ6AEwAXoECAoQAQ#v=onepage&q=1993年颁布的《金融保险企业财务制度》&f=false](https://books.google.com/books?id=ghyADwAAQBAJ&pg=PT311&lpg=PT311&dq=1993年颁布的《金融保险企业财务制度》&source=bl&ots=XRLNeD_e1_&sig=ACfU3U3MqLhUY1pK4AY15yIsUwhSvuyDcA&hl=en&sa=X&ved=2ahUKEwikl3CnvjoAhXDgnIEHUW2C9cQ6AEwAXoECAoQAQ#v=onepage&q=1993年颁布的《金融保险企业财务制度》&f=false)

In July 1999, three state-owned AMCs were set up as a part of the effort to acquire, manage, and dispose of the non-performing loans taken over from the state-owned commercial banks. China Huarong Asset Management Corporation (Huarong), China Great Wall Asset Management Corporation (Great Wall), and China Orient Asset Management Corporation (Orient) were set up to acquire non-performing loans from Industrial and Commercial Bank of China (ICBC), Agricultural Bank of China (ABC), and Bank of China (BoC). As shown in Table 1 below, the four state-owned AMCs acquired around 1400 billion RMB worth of non-performing loans in total. For loans originated before 1996, the AMCs purchased those NPLs at face value from state-owned commercial banks supported by capital from the central bank. Banks received interest-bearing notes issued by the AMCs to the PBOC, and the PBOC funded the losses incurred on the NPLs. After 1996, these four AMCs paid 50% of the face value in cash and transferred the recovered amounts to the PBOC after the disposal of the NPLs acquired from the banks.<sup>10</sup>

Exhibit 1: China’s AMCs: Policy Based NPL Transfer During 1999 – 2000

**China’s AMCs: policy-based NPL transfers during 1999-2000**

| <b>Asset management corp</b> | <b>Matched bank</b> | <b>Assets transferred (RMB billions)</b> | <b>Share of bank loans outstanding (% at end-1998)</b> |
|------------------------------|---------------------|--|--|
| Orient Asset Management      | BoC                 | 267.4                                    | 20.4%  |
| Great Wall Asset Management  | ABC                 | 345.8                                    | 24.6%  |
| Cinda Asset Management       | CCB                 | 373.0                                    | 21.7%  |
| Huarong Asset Management     | ICBC                | 407.7                                    | 17.9%  |
| <b>Total</b>                 |                     | <b>1,393.9</b>                           | <b>20.7%</b>   |

<sup>10</sup> Cousin, Violaine. Banking in China. 2nd ed., Springer, 2011.  
<https://books.google.com/books?id=BCSGDAAAQBAJ&pg=PA172&lpg=PA172&dq=non-performing+loan+china+pwc+debt+to+equity+swap&source=bl&ots=JJ86Ia4uDJ&sig=>

Source: China's Asset Management Corporations. Guonan, Ma, Ben S. C. Fung. Sep 2002.

### **2.3.3 Roll out and progress of risk-based loan classification**

After the big four banks transferred their non-performing loans to the AMCs, the PBOC issued a notification on rolling out risk-based loan classification with the “Guidance on Risk-based Loan Classification (Trial)” in 2001. In 2003, The China Banking Regulatory Commission announced that all financial institutions with a credit business must follow risk-based loan classification. Wholly state-owned commercial banks, joint shareholding commercial banks, merchant banks, credit unions, and other financial institutions carrying out credit business started to classify loans into five groups as pass loans, special-mentioned loans, substandard loans, doubtful loans, and loss loans. Among these five categories, substandard loans, doubtful loans, and loss loans were considered as non-performing loans.

The new definitions of risk-based loan classification categories changed into five levels as listed below:

1. Pass loan: Borrowers are able to honor the terms of the contracts, and there is no reason to doubt their ability to repay the principal and interest of loans in full and in a timely manner.
2. Special mention loan: Borrowers are able to serve their loans currently, although repayment may be adversely affected by specific factors.
3. Substandard loan: Borrowers’ abilities to service their loans are in question. Borrowers cannot depend on their normal business revenues to pay back the principal and interest, so losses may ensue, even when guarantees are invoked.

4. Doubtful loan: Borrowers cannot pay back the principal and interest in full and significant losses will be incurred, even when guarantees are invoked.
5. Loss loan: The principal and interest of loans cannot be recovered, or only a small portion can be recovered after taking all possible measures and resorting to necessary legal procedures.<sup>11</sup>

In 2007, the China Banking Regulatory Commission (CBRC) issued “Loan Risk Categorization Guidelines” to tighten the classification of non-performing loans and clarify the basis for estimating the amount needed as bad debt reverse.<sup>12</sup>

In April 2019, the China Banking and Insurance Regulatory Commission (CBIRC) released a draft measure “Commercial Bank Financial Asset Risk Categorization Provisional Measures.” The draft rule defined that loans that are overdue should be classified as special mentioned loans or lower; loans that are overdue for more than 90 days should be classified as substandard loans or lower; loans that are overdue for more than 270 days should be classified as doubtful loans or lower; loans that are overdue more than 360 days should be classified as loss loans. Once this rule is implemented, loans that are overdue for more than 90 days should be classified as non-performing loans, even if the loans have sufficient collaterals. Also, if a non-retail debtor’s total amount of loan overdue for more than 90 days is over 5% of the total loans in a single bank, all banks should classify this debtor’s loans as non-performing.<sup>13</sup>

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<sup>11</sup> “Banks to Adopt Five-Category Loan Classification System in 2004.” People’s Daily, 6 Sept. 2003, [en.people.cn/200309/06/eng20030906\\_123830.shtml](http://en.people.cn/200309/06/eng20030906_123830.shtml).

<sup>12</sup> CBNEditor, and CBNEditor ». “CBIRC Launches New Draft Measures for Commercial Bank Asset Risk Categories.” China Banking News, 2019, [www.chinabankingnews.com/2019/04/30/cbirc-launches-new-draft-measures-for-commercial-bank-asset-risk-categories/](http://www.chinabankingnews.com/2019/04/30/cbirc-launches-new-draft-measures-for-commercial-bank-asset-risk-categories/).

<sup>13</sup> Qiu, Caizhou. “Soliciting Public Opinion on TheCommercial Bank Financial Asset Risk Categorization Provisional Measures [《商业银行金融资产风险分类暂行办法》公开征求意见.]” Xinhua [新京报], 30 Apr. 2019, [www.bjnews.com.cn/finance/2019/04/30/574391.html](http://www.bjnews.com.cn/finance/2019/04/30/574391.html).

With the release of the official draft guidance, CBIRC also used window guidance, an informal mechanism, to encourage banks with nationwide operations to classify corporate loans overdue for more than 60 days as non-performing loans.<sup>14</sup> The regulators tried to tighten the requirement of risk-based classification to accelerate the recognition of non-performing loans. Still, this push was put on hold early this year due to the pandemic.

In order to help businesses weather the negative impact from COVID-19, the CBIRC urged banks to roll over or defer the collection of maturing corporate loans in April 2020. It also allowed banks to loosen their tolerance on non-performing loans made to smaller firms impacted by the pandemic.<sup>15</sup>

We can see that the general rules of thumb used by the NPL, ECB, IMF, and CBIRC to recognize NPL are similar. All of them use late payment by 90 days as a benchmark to classify loans as non-performing. Thus, this makes the discussion of the NPL ratios in the next section more meaningful as people can draw meaningful comparisons between the NPL ratios of different countries.

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<sup>14</sup> Luo, Jun, et al. "China to Impose Stricter Policy on Bad-Loan Recognition." Bloomberg, 6 May 2019, [www.bloomberg.com/news/articles/2019-05-06/china-is-said-to-impose-stricter-policy-on-bad-loan-recognition?sref=e9diMwE1](http://www.bloomberg.com/news/articles/2019-05-06/china-is-said-to-impose-stricter-policy-on-bad-loan-recognition?sref=e9diMwE1).

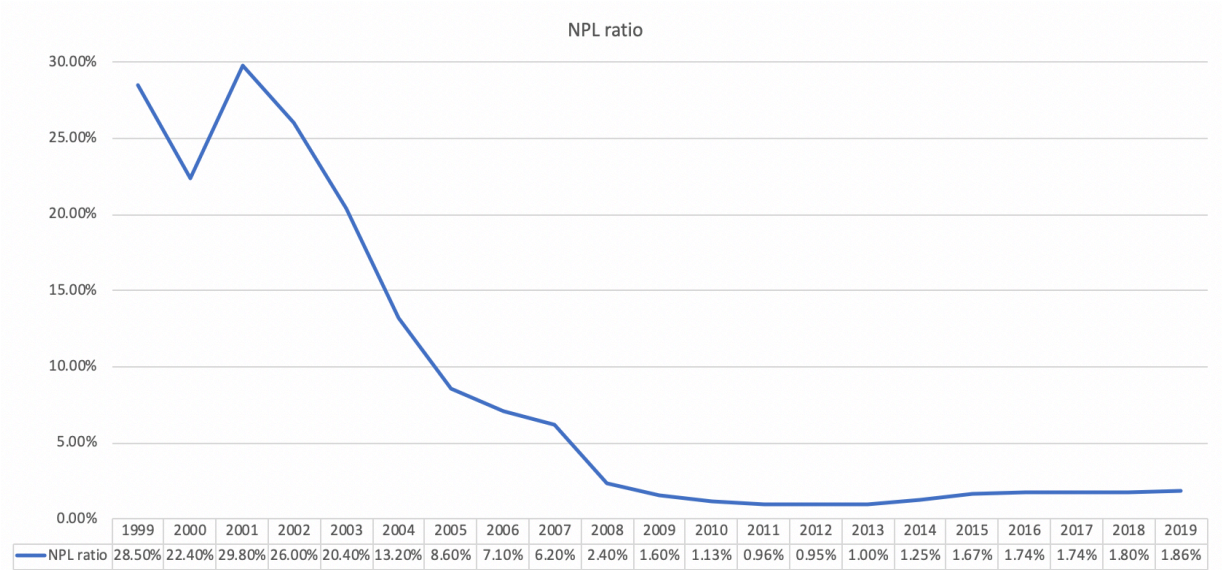
<sup>15</sup> Yanxia Li, and Cheng Shen. "Central Bank: Central Bank: Sufficient Resources and Capacity to Deal with the Impact of the Epidemic on SMEs [央行: 有充分资源和能力应对疫情对中小企业影响]." Xinhuanet, 24 Feb. 2020, [www.xinhuanet.com/politics/2020-02/24/c\\_1125619370.htm](http://www.xinhuanet.com/politics/2020-02/24/c_1125619370.htm).

### 3 Analysis of Trends of Non-performing Loans in China

#### 3.1 Decrease in NPL Ratio

From Exhibit 2 below, we can see that the non-performing loan ratio within China’s banking system was 28.5% in 1999, according to data published by the World Bank. The NPL ratio steadily dropped to its lowest rate of 0.95% in 2012, then slightly increased during the last eight years. The latest NPL ratio for commercial banks released by CBIRC for 2019 was 1.86%.

Exhibit 2: NPL Ratio for Commercial Banks in China<sup>16</sup>



Source: The World Bank, CBIRC

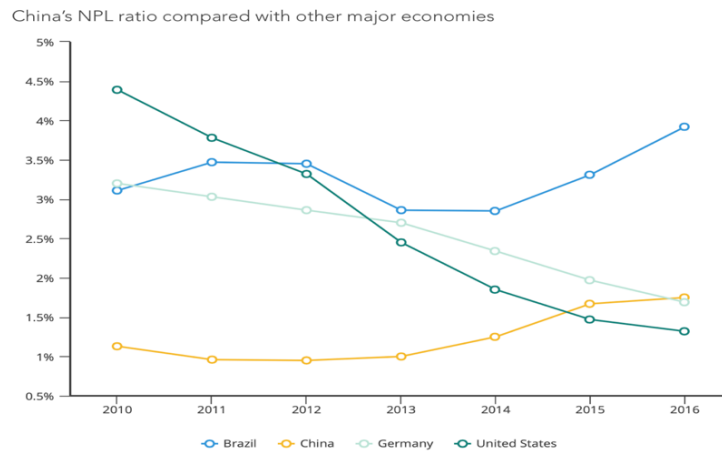
There are two likely explanations behind the dramatic decrease in NPL ratios in China over a relatively short period. The first reason is that the central government chose to form AMCs

<sup>16</sup> “Bank Nonperforming Loans to Total Gross Loans (%) - China.” The World Bank, International Monetary Fund, 2019, data.worldbank.org/indicator/FB.AST.NPER.ZS.



to take over and dispose the non-performing assets from banks. The second reason is that proper supervision was set-up to oversee the developing banking system. The State Council established the CBRC in 2003 to supervise banks, non-bank financial institutions, and credit cooperatives for a “safe and sound banking system in China.” Lowering the ratio of non-performing loans was one of the key targets from the PBOC and CBRC to banks to safeguard financial stability. The PBOC released “Interim Measures for Monitoring and Assessment of Commercial Bank Non-Performing Assets” in 2004 and “Measures for Monitoring and Assessment of Non-performing Assets of Rural Credit Cooperatives” in 2007 to tighten the monitoring and assessment of NPLs within the banking system to maintain the stability of the credit system.

Exhibit 3: China’s NPL Ratio Compared With Other Major Economies<sup>17</sup>



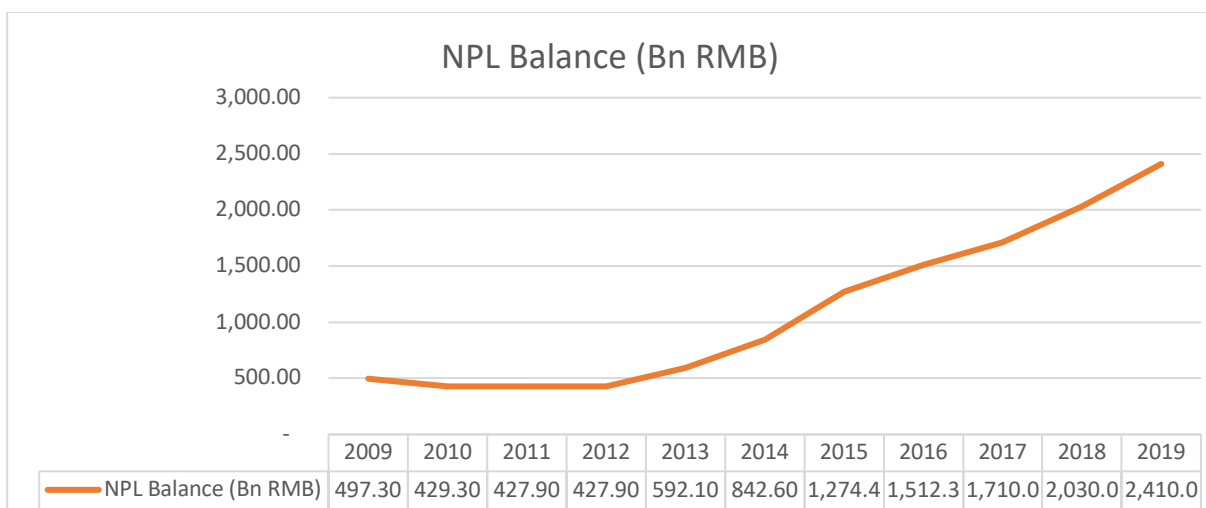
Source: Marcopolo.org

<sup>17</sup> McMahon, Dinny. “This Time It’s Different: The Ecosystem of China’s Financial Sector Cleanup.” Macro Polo, Paulson Institute, 18 Mar. 2020, [macropolo.org/analysis/this-time-its-different-the-ecosystem-of-chinas-financial-sector-cleanup/](http://macropolo.org/analysis/this-time-its-different-the-ecosystem-of-chinas-financial-sector-cleanup/).

### 3.2 Increase in NPL Balance

Although China's NPL ratio decreased between 1999 and 2019, its NPL balance built up. The balance of NPLs for commercial banks increased from around 500 billion RMB in 2009 to approximately 2.4 trillion RMB in 2019. This data is shown in Exhibit 4.

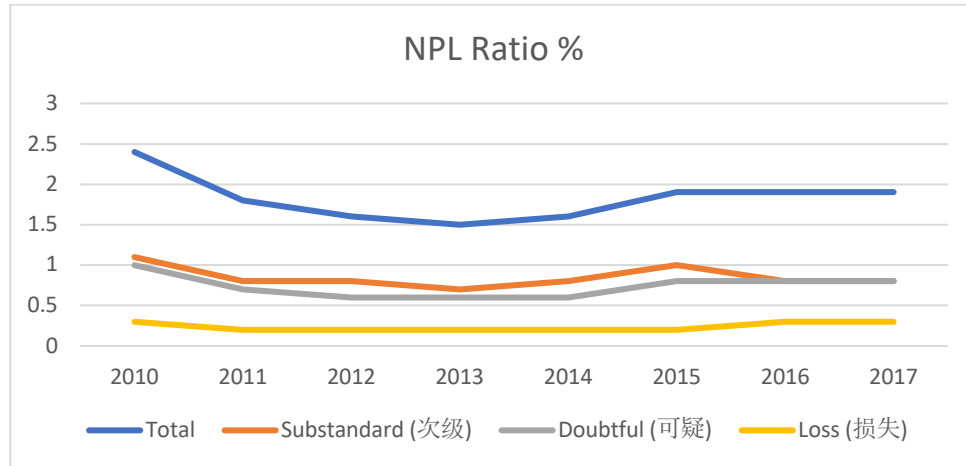
Exhibit 4: NPL Balance for Commercial Banks in China.



Source: Choice Database, CBIRC

Within those non-performing loans, the weight of substandard, doubtful, and loss loans did not fluctuate widely from 2010 to 2017. The amount of substandard loans is about the same as doubtful loans. The amount of loss loans is less than half of the size compared with substandard loans or doubtful loans. This data is shown in Exhibit 5.

Exhibit 5: NPL Balance of Commercial Banks in China.



Source: Choice Database

Two reasons can partially explain the rationale behind the fast increase of non-performing loans within the banking system, according to a report from PwC.<sup>18</sup> The first reason is that China relies heavily on fixed investment, which was about 80% of GDP in 2016.<sup>19</sup> GDP growth had been slowing down, but the amount of fixed investment as a proportion of GDP kept increasing. This data is shown in Exhibit 6.

The second reason is that bank loans accounted for 70% of China’s total financing for its real economy in 2016, while debt and equity markets only consisted of 25% of the financing for the real economy.<sup>20</sup> With the proportion of investment in fixed assets increasing while GDP growth slows, it is not much of a surprise to see the balance of NPLs to increase since banks provided much of this financing.

<sup>18</sup> <sup>19</sup> <sup>20</sup> PricewaterhouseCoopers. “China's Ballooning Debt: Is It Time to Address It?” PwC, Aug. 2017, [www.pwccn.com/en/research-and-insights/china-s-ballooning-debt.html](http://www.pwccn.com/en/research-and-insights/china-s-ballooning-debt.html).

Exhibit 6: Fixed Asset Investment as Proportion of China GDP<sup>21</sup>



Source: Wind

Source: PwC

### 3.3 Change in NPL balance and ratio by industry

The previous sections present aggregate data for NPLs in China. This section presents NPL data disaggregated by industry. Below is the industry NPL data from CSMAR Research Data Services for the period of 2006 to 2016.

<sup>21</sup> PricewaterhouseCoopers. "China's Ballooning Debt: Is It Time to Address It?" PwC, Aug. 2017, [www.pwc.com/en/research-and-insights/china-s-ballooning-debt.html](http://www.pwc.com/en/research-and-insights/china-s-ballooning-debt.html).

## Exhibit 7: NPL Ratio by Industry<sup>22</sup>

| NPL Ratio  | 2006  | 2007  | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016    | 2016<br>minus<br>2009 | Change of<br>Ratio<br>2016 v.s. 2009 |
|--|-------|-------|------|------|------|------|------|------|------|------|---------|-----------------------|--------------------------------------|
| Agriculture  | 46.09 | 47.10 | 7.50 | 4.52 | 3.15 | 2.35 | 2.40 | 2.27 | 2.64 | 3.54 | No data |                       |                                      |
| Accommodation And Catering   | 19.55 | 16.11 | 7.70 | 4.82 | 3.01 | 2.56 | 1.90 | 1.27 | 1.47 | 2.26 | 2.68    | -2.14                 | -44%                                 |
| Wholesale and Retails  | 17.30 | 13.92 | 4.08 | 2.71 | 1.56 | 1.16 | 1.60 | 2.16 | 3.05 | 4.25 | 4.68    | 1.97                  | 73%                                  |
| Culture, Sports, And Entertainment                                 | 14.83 | 13.12 | 6.08 | 3.24 | 1.76 | 1.19 | 0.90 | 0.57 | 0.65 | 0.82 | 0.87    | -2.37                 | -73%                                 |
| Scientific Research And Polytechnic Service                        | 13.60 | 11.16 | 4.17 | 2.98 | 1.88 | 0.93 | 1.00 | 0.68 | 0.66 | 0.80 | 1.12    | -1.86                 | -62%                                 |
| Automobiles  |       | 9.93  | 5.45 | 2.92 | 1.80 | 1.77 | 2.20 | 2.04 | 2.07 | 2.15 | 2.29    | -0.63                 | -22%                                 |
| Manufacturing  | 10.40 | 8.89  | 3.30 | 2.58 | 1.87 | 1.54 | 1.60 | 1.79 | 2.42 | 3.35 | 3.85    | 1.27                  | 49%                                  |
| Rental And Business Services                                       | 10.61 | 8.02  | 1.84 | 0.90 | 0.73 | 0.60 | 0.50 | 0.29 | 0.33 | 0.53 | 0.52    | -0.38                 | -42%                                 |
| Others   |       | 7.57  | 1.78 | 1.41 | 1.01 | 0.84 | 0.80 | 0.93 | 1.19 | 1.59 | 1.73    | 0.32                  | 23%                                  |
| Public Administration And Social Organizations                     | 5.39  | 6.21  | 1.48 | 0.44 | 0.60 | 0.70 | 0.40 | 0.32 | 0.25 | 0.20 | 0.19    | -0.25                 | -57%                                 |
| Resident Services, Repairs, And Other Services                     | 4.78  | 6.01  | 2.63 | 1.68 | 1.29 | 0.98 | 0.90 | 1.05 | 1.43 | 2.07 | 2.55    | 0.87                  | 52%                                  |
| Healthcare And Social Work   | 4.31  | 5.68  | 2.60 | 1.61 | 1.03 | 0.73 | 0.50 | 0.18 | 0.11 | 0.12 | 0.16    | -1.45                 | -90%                                 |
| Information Transfer, Software And Information Technology Services | 5.33  | 5.55  | 3.32 | 2.62 | 1.93 | 1.44 | 1.40 | 0.95 | 1.15 | 1.06 | 0.79    | -1.83                 | -70%                                 |
| Real Estate  | 6.61  | 4.91  | 3.35 | 1.93 | 1.26 | 0.97 | 0.70 | 0.48 | 0.50 | 0.81 | 1.04    | -0.89                 | -46%                                 |
| Education  | 2.38  | 3.79  | 3.24 | 2.29 | 1.64 | 1.62 | 1.20 | 0.89 | 0.58 | 0.46 | 0.42    | -1.87                 | -0.82                                |
| Construction   | 4.27  | 3.35  | 1.71 | 1.32 | 0.77 | 0.66 | 0.60 | 0.50 | 0.72 | 1.39 | 1.67    | 0.35                  | 27%                                  |
| Mining   | 3.74  | 3.27  | 0.68 | 0.38 | 0.25 | 0.27 | 0.20 | 0.31 | 1.04 | 2.33 | 3.57    | 3.19                  | 839%                                 |
| Credit Card  |       | 2.63  | 2.39 | 2.83 | 1.55 | 1.19 | 1.10 | 1.28 | 1.49 | 1.84 | 1.90    | -0.93                 | -33%                                 |
| Utilities,Heat,Gas, Water Production & Supply                      | 2.18  | 2.39  | 2.09 | 1.41 | 1.19 | 1.03 | 0.70 | 0.51 | 0.34 | 0.37 | 0.35    | -1.06                 | -75%                                 |
| Logistic, Warehouse, Postal  | 2.01  | 2.10  | 1.59 | 1.29 | 0.97 | 1.09 | 0.80 | 0.68 | 0.52 | 0.58 | 0.54    | -0.75                 | -58%                                 |
| Administration Of Water, Environment, And Public Facilities        | 1.30  | 1.27  | 1.14 | 0.37 | 0.39 | 0.33 | 0.20 | 0.11 | 0.08 | 0.12 | 0.16    | -0.21                 | -57%                                 |
| Mortgage   |       | 1.06  | 0.91 | 0.59 | 0.37 | 0.30 | 0.30 | 0.26 | 0.29 | 0.39 | 0.36    | -0.23                 | -39%                                 |
| Finance  | 1.38  | 0.69  | 0.21 | 0.08 | 0.30 | 0.21 | 0.20 | 0.12 | 0.21 | 0.19 | 0.13    | 0.05                  | 63%                                  |
| Personal Loan  | 5.42  | 2.77  | 1.29 | 0.92 | 0.58 | 0.50 | 0.50 | 0.53 | 0.62 | 0.79 | 0.76    | -0.16                 | -17%                                 |
| Mean   | 9.07  | 7.81  | 2.94 | 1.91 | 1.29 | 1.04 | 0.94 | 0.84 | 0.99 | 1.33 | 1.41    | -0.39                 | 11%                                  |
| Std. Dev   | 10.28 | 9.39  | 2.03 | 1.27 | 0.77 | 0.61 | 0.63 | 0.65 | 0.84 | 1.17 | 1.31    |                       |                                      |
| Mean + 1 Std Dev   | 19.35 | 17.20 | 4.97 | 3.18 | 2.06 | 1.65 | 1.57 | 1.49 | 1.83 | 2.50 | 2.72    |                       |                                      |
| Mean - 1 Std Dev   | -1.20 | -1.58 | 0.91 | 0.64 | 0.51 | 0.43 | 0.32 | 0.19 | 0.16 | 0.17 | 0.10    |                       |                                      |

Source: CSMAR Research Data Services

I performed several calculations to better assist with analyzing the change of NPL ratios over time, as well as across industries.

First, I calculated the average NPL ratio and the standard deviation of NPL ratio across industries. The average industry NPL ratio serves as a benchmark to assess which industries can

<sup>22</sup> There was no NPL data found for agricultural industry in 2016.

pay back their loans and which ones tend to have liquidity issues or cash flow issues more often. We can see that in 2006, two sectors had NPL ratios higher than the average plus one standard deviation. These two industries are wholesale and retail and mining. No industry had an NPL ratio fall below one standard deviation from the cross-industry average in 2016. The industries with high NPL ratios should be a red flag for investors to watch out for companies that are highly leveraged, cyclical, or have a business model that cannot guarantee stable operational cashflows.

From Exhibit 7 above, we can see that the average and the standard deviation NPL ratio decreased quickly after 2006 and then stabilized after 2009. Thus, I chose to compare the 2016 and 2009 NPL ratios to analyze which industries improved or deteriorated during this period and if any other trends could be observed from these data.

Several industries stood out from the rest. First, the mining industries had an 839% increase in the non-performing loan ratio from 2009 to 2016, which was far above its peers and reached above the same level as in 2006. The difference of NPL ratio between 2016 and 2009 is 3.57% non-performing loan ratio, which also ranked first among all the industries. Wholesale and retails had the highest NPL ratio in 2016 with around 2% increase in NPL ratio since 2009. Manufacturing had the second highest NPL ratio in 2016 with around 1.27% increase in NPL ratio since 2009.

## Exhibit 8: NPL Balance by Industry<sup>23</sup>

| NPL Balance (in 100,000,000 RMB)                                   | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2016<br>minus<br>2009 | 2016<br>v.s.<br>2009 |
|--|------|------|------|------|------|------|------|------|------|------|------|-----------------------|----------------------|
| Manufacturing  | 4467 | 4589 | 1859 | 1717 | 1453 | 1454 | 1771 | 2150 | 3036 | 4298 | 5018 |                       | 192%                 |
| Wholesale and Retails  | 2380 | 2300 | 702  | 644  | 549  | 564  | 1071 | 1700 | 2695 | 3998 | 4524 | 3879                  | 602%                 |
| Credit Card  |      | 23   | 42   | 77   | 73   | 102  | 153  | 259  | 388  | 583  | 741  | 664                   | 862%                 |
| Mining   | 135  | 137  | 35   | 27   | 23   | 31   | 31   | 49   | 182  | 439  | 677  | 650                   | 2427%                |
| Mortgage   |      | 293  | 268  | 264  | 205  | 192  | 204  | 226  | 290  | 483  | 607  | 343                   | 130%                 |
| Real Estate  | 953  | 905  | 676  | 504  | 440  | 353  | 279  | 214  | 263  | 456  | 577  | 73                    | 14%                  |
| Construction   | 226  | 226  | 129  | 117  | 100  | 109  | 120  | 129  | 214  | 459  | 576  | 458                   | 390%                 |
| Others   |      | 648  | 183  | 205  | 115  | 114  | 107  | 130  | 177  | 277  | 356  | 151                   | 74%                  |
| Logistic, Warehouse, Postal  | 325  | 391  | 352  | 375  | 354  | 436  | 361  | 324  | 274  | 335  | 342  | -32                   | -9%                  |
| Rental And Business Services                                       | 713  | 610  | 175  | 155  | 146  | 129  | 105  | 78   | 107  | 212  | 263  | 108                   | 70%                  |
| Accommodation And Catering   | 250  | 242  | 119  | 96   | 93   | 90   | 87   | 79   | 105  | 170  | 204  | 108                   | 112%                 |
| Utilities,Heat,Gas, Water Production & Supply                      | 325  | 423  | 453  | 337  | 295  | 274  | 193  | 137  | 99   | 117  | 121  | -216                  | -64%                 |
| Resident Services, Repairs, And Other Services                     | 129  | 104  | 56   | 39   | 34   | 31   | 41   | 34   | 50   | 78   | 98   | 59                    | 152%                 |
| Administration Of Water, Environment, And Public Facilities        | 90   | 109  | 119  | 81   | 90   | 72   | 39   | 22   | 18   | 31   | 49   | -31                   | -39%                 |
| Information Transfer, Software And Information Technology Services | 141  | 134  | 68   | 53   | 34   | 30   | 34   | 28   | 36   | 42   | 41   | -12                   | -23%                 |
| Automobiles  |      | 92   | 55   | 38   | 28   | 24   | 23   | 25   | 27   | 29   | 38   | 0                     | -1%                  |
| Culture, Sports, And Entertainment                                 | 90   | 88   | 39   | 24   | 18   | 15   | 13   | 10   | 14   | 22   | 26   | 2                     | 9%                   |
| Scientific Research And Polytechnic Service                        | 63   | 43   | 19   | 16   | 13   | 8    | 11   | 8    | 9    | 13   | 21   | 5                     | 29%                  |
| Education  | 73   | 118  | 97   | 76   | 56   | 48   | 29   | 23   | 17   | 15   | 14   | -62                   | -81%                 |
| Finance  | 43   | 17   | 9    | 7    | 5    | 4    | 4    | 3    | 8    | 13   | 11   | 4                     | 67%                  |
| Healthcare And Social Work   | 36   | 49   | 24   | 20   | 16   | 13   | 10   | 5    | 3    | 4    | 6    | -14                   | -70%                 |
| Public Administration And Social Organizations                     | 124  | 126  | 35   | 17   | 20   | 19   | 10   | 8    | 6    | 6    | 6    | -11                   | -64%                 |
| Personal Loan  | 1425 | 1056 | 548  | 585  | 422  | 432  | 487  | 640  | 882  | 1372 | 1741 | 1157                  | 198%                 |
| Agriculture  | 981  | 1014 | 94   | 83   | 114  | 129  | 206  | 264  | 388  | 637  |      |                       |                      |

Source: CSMAR Research Data Services

A similar analysis is also done for NPL balance change over time and across industries with the last two columns comparing the difference and change in NPL balance from 2009 to 2016. We can see the industries with the highest amount of NPL balance increases are wholesale and retails, personal finance, credit card, mining, and construction. The balance for non-performing loans for the mining industry increased by 24 times from 2009 to 2016, which is ten times larger than the change of NPL balance for all industries from 2009 to 2016.

<sup>23</sup> There was no NPL data found for agricultural industry in 2016.

The combination of an increase in non-performing loan ratio, highly ranked NPL ratio among peers, and sizeable non-performing loan balance are all indicators for the poor performance of the mining industry in my view.

To validate whether there is any strong correlation between the NPL ratio and stock movement, I compared the performance of the FTSE China A 600 Mining Index with the NPL ratio of the mining industry. The NPL ratio for mining decreased from 3.74% in 2006 to 0.25% in 2010. From the index, we see an upward trend from 2006 to 2007, with a sudden decline in 2008 due to the financial crisis. The index reached its peak in 2010 after the financial crisis with the lowest NPL ratio but did not manage to exceed the record high from 2007. After 2010, the NPL ratio for mining increased from 0.25% to 3.57% in 2016. But the stock index stayed fairly stable along the line of 10,000 and stopped dropping after 2014, although the NPL ratio in 2014 was 1.04 and doubled in the next year. Judging from the graphs, it is hard to see any clear and consistent pattern on whether changes in the NPL ratio for the mining have a direct impact on stock performance.

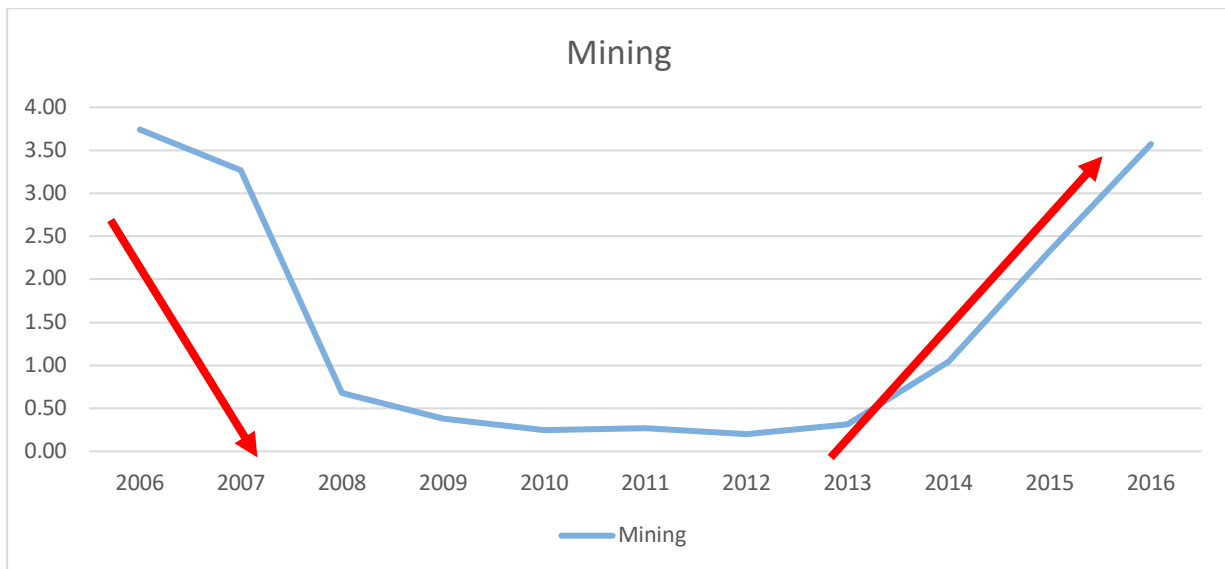


Exhibit 9: FTSE China A 600 Mining Index



Source: Bloomberg

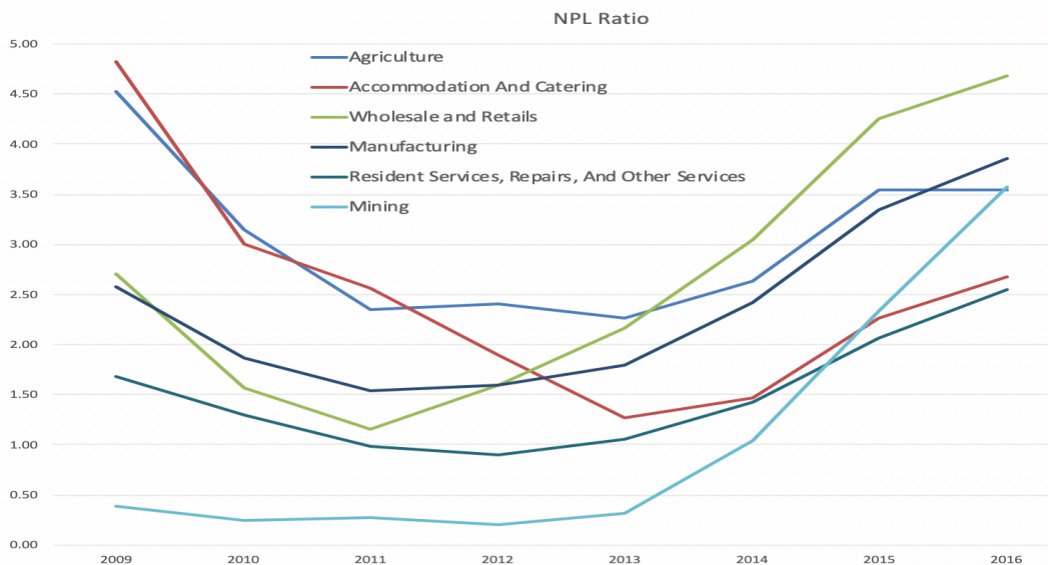
Exhibit 10: Non-Performing Loan Ratio: Mining Industry



Source: CSMAR Research Data Services

The industries with the highest non-performing loan ratio in 2016 are shown as in the graph below. We can see that all five industries had non-performing loan ratio trending upward from 2013. Within these five industries, the slope for wholesale and retail industry and mining industry are the steepest. The non-performing loan balance for wholesale and retails business was the second largest among all industries, with mining ranked the fourth on the list.

Exhibit 11: NPL Ratio by Industry: Top 6<sup>24</sup>



Source: CSMAR Research Data Services

### 3.4 Change in non-performing loan by geographic locations

This section examines the NPL balance and ratio by region and province. Regions and provinces with large balances of NPLs signal more investment opportunities with larger volume per transaction in the area.

<sup>24</sup> There was no NPL data found for agricultural industry in 2016 thus kept flat as 2015.

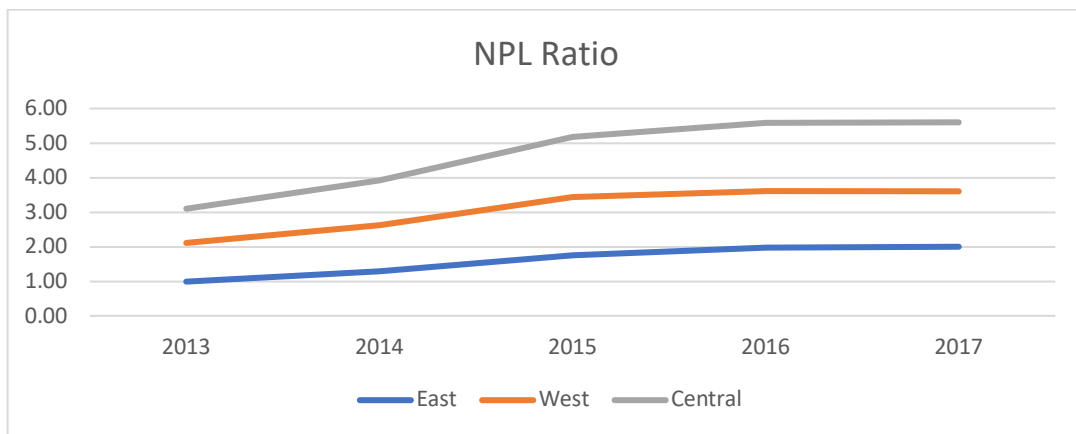
Exhibit 12 below shows the trend in the NPL balance held by commercial banks by region. We can see that majority of the NPLs were located in the eastern part of the country. However, the NPL balance in the west increased at the fastest rate of 484% over the five years from 2013 to 2017. As shown in Exhibit 13, across all regions, the non-performing loan ratio increased, and the central had the highest NPL ratio of the three.

Exhibit 12: Commercial Banks' Non-Performing Loan Balance by Region (In 100,000,000 RMB)

| Commercial Banks | Area            | NPL Balance |      |      |      |      | 2017 V.S. 2013 |
|------------------|-----------------|-------------|------|------|------|------|----------------|
|                  |                 | 2013        | 2014 | 2015 | 2016 | 2017 |                |
|                  | East            | 3931        | 5418 | 7463 | 8199 | 8844 | 125%           |
|                  | West            | 663         | 1215 | 2486 | 3186 | 3873 | 484%           |
|                  | Central         | 895         | 1359 | 2170 | 2849 | 3298 | 269%           |
|                  | <b>Weight %</b> |             |      |      |      |      |                |
|                  | East            | 72%         | 68%  | 62%  | 58%  | 55%  |                |
|                  | West            | 12%         | 15%  | 21%  | 22%  | 24%  |                |
|                  | Central         | 16%         | 17%  | 18%  | 20%  | 21%  |                |

Source: Choice Database

Exhibit 13: NPL Ratio by Geographic Location (in 100,000,000 RMB)



Source: Choice Database

Judging from the two exhibits above, provinces in the east could be more attractive to investors. It has a larger pool of non-performing loans available, which provides more investment opportunities for investors. The average quality of NPLs in the east also should be higher as the NPL ratio is the lowest among the three regions.

Exhibit 14 provides data on NPL balance and ratio by province. The average non-performing loan ratio in 2017 was 2.01%. The top five provinces with the most NPLs financed by commercial banks in 2017 were Shandong, Guangdong, Zhejiang, Jiangsu, and Sichuan. Within these five provinces, the NPL ratio more than doubled between 2013 and 2017 for Shandong and Sichuan. Investors should be more conservative when it comes to investing in NPLs from these two provinces.

A lower NPL ratio indicates a better ability of local businesses to repay debts and also a more robust economic environment. The five provinces with the lowest NPL ratios in 2017 are Xizang, Beijing, Shanghai, Hainan, and Chongqing.

It would be worthwhile, in my opinion, for NPL investors to start their research on investment opportunities in areas with either high NPL balance or low NPL ratio. Shandong, Guangdong, Zhejiang, Jiangsu, and Sichuan have a sizeable amount of NPLs for investing in each of the provinces. The NPL ratio increased more than 150% for the five years in Shandong and Sichuan. The NPL ratios in 2017 are also both higher compared with the NPL ratio for Guangdong, Zhejiang, and Jiangsu. Thus, I would recommend focusing on investment opportunities in Guangdong, Zhejiang, and Jiangsu.

Xizang, Beijing, Shanghai, Hainan, and Chongqing have the lowest NPL ratio. The NPL balances for these provinces are small. I'd recommend Beijing and Shanghai for investors looking for investments of small sizes. These two cities are the capital and financial center with strong economic growth, which indicates a shorter recovery timeline and better recovery rate for the NPL assets.

Exhibit 14: Selected NPL Balance and NPL Ratio By Provinces (in 100,000,000 RMB)

| Province                         | NPL Balance |      |       |       |       |                | NPL Ratio |      |      |      |      |           |  |
|----------------------------------|-------------|------|-------|-------|-------|----------------|-----------|------|------|------|------|-----------|--|
|                                  | 2013        | 2014 | 2015  | 2016  | 2017  | 2017 V.S. 2013 | 2013      | 2014 | 2015 | 2016 | 2017 | 2017 V.S. |  |
| Shandong                         | 427         | 717  | 1081  | 1321  | 1727  | 305%           | 1.17      | 1.72 | 2.32 | 2.48 | 3.00 | 156%      |  |
| Guangdong                        | 542         | 802  | 1152  | 1301  | 1353  | 150%           | 0.86      | 1.15 | 1.43 | 1.38 | 1.30 | 51% *7    |  |
| Zhejiang                         | 1036        | 1220 | 1601  | 1568  | 1306  | 26%            | 1.98      | 2.04 | 2.50 | 2.26 | 1.70 | -14%      |  |
| Jiangsu                          | 718         | 848  | 1104  | 1146  | 1149  | 60%            | 1.23      | 1.31 | 1.55 | 1.42 | 1.30 | 6% *6     |  |
| Sichuan                          | 173         | 320  | 573   | 764   | 951   | 450%           | 0.79      | 1.26 | 2.00 | 2.33 | 2.50 | 216%      |  |
| Xizang                           | 4.5         | 3.5  | 4.3   | 6     | 9.2   | 104%           | 0.45      | 0.23 | 0.23 | 0.27 | 0.3  | -33%      |  |
| Beijing                          | 177         | 293  | 366   | 260   | 274   | 55%            | 0.54      | 0.72 | 0.84 | 0.55 | 0.5  | -7%       |  |
| Shanghai                         | 313         | 371  | 397   | 308   | 281   | -10%           | 0.91      | 1.02 | 1.01 | 0.68 | 0.6  | -34%      |  |
| Hainan                           | 10.3        | 14.2 | 21.9  | 27.7  | 33.7  | 227%           | 0.49      | 0.55 | 0.69 | 0.73 | 0.8  | 63%       |  |
| Chongqing                        | 51.7        | 75.9 | 180.3 | 256.3 | 267.4 | 417%           | 0.35      | 0.46 | 0.99 | 1.28 | 1.2  | 243%      |  |
| <i>Average for all provinces</i> | 177         | 258  | 391   | 459   | 517   | 192%           | 0.88      | 1.16 | 1.69 | 1.89 | 2.01 | 128%      |  |

Source: Choice Database

## 4 Non-Performing Loan Market Landscape

Exhibit 15 shows a high-level structure of the China NPL market. The main participants in the NPL market include state-owned AMCs, local AMCs, and other private investors like law firms, private equity firms, individual investors, etc.

There are five state-owned national AMCs in total. Cinda, Huarong, Orient, and Great Wall were set up twenty years ago. These AMCs were initially set up to handle the recovery of non-performing loans acquired from banks but later expanded into a wide range of financial activities, including banking, leasing, securities, brokerage, asset management, investment management, and international investments. The regulator recently granted the fifth state-owned AMC license. Beijing-based Jiantou Citic Asset Management will finish its transformation to China Galaxy Asset Management (Galaxy) this year. These five AMCs have a comparative advantage as they receive financing from the Ministry of Finance with low interest rate. Two of these AMCs are publicly listed on the Hong Kong Stock Exchange. The national AMCs can participate in the primary market without geographic restriction.

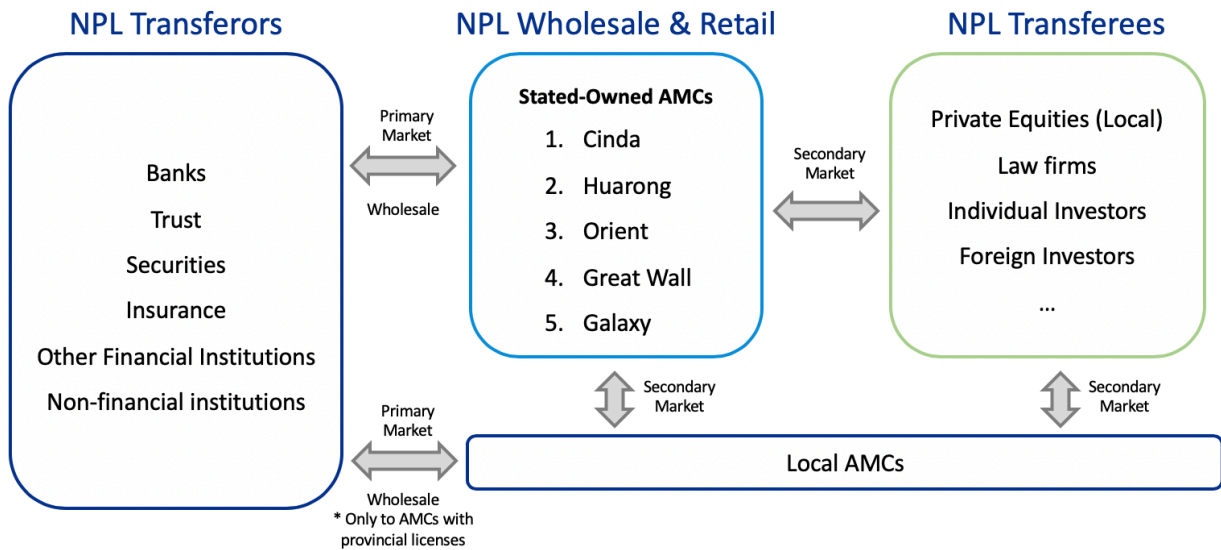
There are close to 60 local AMCs with provincial or city licenses.<sup>25</sup> They can only participate in the bulk purchase of NPLs from financial institutions within the province or region where their license is approved. They receive funding from local governments, banks, and other financial institutions. Each province can issue up to two provincial AMC licenses. Provincial AMCs can participate in both primary and secondary markets, depending on their license. The

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<sup>25</sup> License for the fifth state-owned AMC issued after 20 years [万亿不良资产市场迎大事! 时隔 20 年, 第五大 AMC 来了, 银河资产正式获批, 还有外资正等牌照] Sun, Lulu. “万亿不良资产市场迎大事! 时隔 20 年, 第五大 AMC 来了, 银河资产正式获批, 还有外资正等牌照.” Sina, 18 Mar. 2020, [finance.sina.com.cn/stock/zqgd/2020-03-18/doc-iimxyqwa1260781.shtml](https://finance.sina.com.cn/stock/zqgd/2020-03-18/doc-iimxyqwa1260781.shtml).<https://finance.sina.com.cn/stock/zqgd/2020-03-18/doc-iimxyqwa1260781.shtml>

local AMCs cannot resell the NPLs purchased and should workout the NPLs through credit restructure. The NPL package can only be sold to AMCs with no more than three NPLs in one package.<sup>26</sup> There are also many private corporations, law firms, private equity firms, or individual investors participating in the NPL market. They can purchase or sell individual NPL in secondary market. In general, buyers in the primary market earn a higher profit margin and have better access to higher quality NPLs.

Exhibit 15: NPL Market Landscape



Source: KPMG

<sup>26</sup> Li, Zimu, et al. "China Finance: New Measures for the Administration of Bulk Transfer of Non-Performing Assets Promulgated to Accelerate the Bankruptcy and Liquidation of Zombie Enterprises [中国金融：不良资产批量转让管理新办法出台，加快僵尸企业破产清算]." Reuters, 27 Oct. 2016, www.reuters.com/article/idCNL4S1CX1D0.

## 4.1 Primary Market

The selling of NPLs from banks to AMC's is called the primary market.<sup>27</sup> As mentioned in the previous section, the five state-owned national AMC's have a few comparative advantages when it comes to purchasing and re-selling NPLs from banks. Bank can only sell NPL packages to AMC's with a national or provincial license. Second, the five state-owned AMC's have a national license and receive funding with lower interest rates directly from the Ministry of Finance. This enables them to handle NPL packages with large notional principal. Thirdly, the national AMC's are not bounded by geographic locations. They can purchase and sell NPLs all over the country. These three advantages make the national AMC's the go-to group when financial institutions want to auction their NPLs.

Based on research from KPMG, the transaction price in the NPL primary market increased from 30% in 2013 to 40% in 2017 then decreased back to around 30% after 2017.<sup>28</sup> Before 2016, the main sellers in the primary market were the large national commercial banks, and the main buyers were the five big AMC's. After 2016, state-owned shareholding commercial banks, city commercial banks, and rural commercial banks showed increasing interest in purchasing NPL packages. AMC's with provincial licenses became more active in purchasing NPL packages in the primary market as well.

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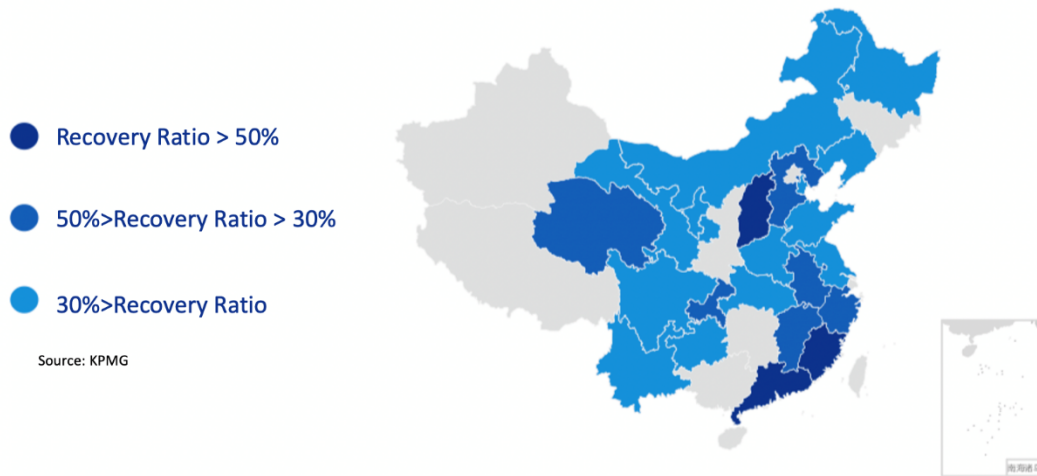
<sup>27</sup> "Analysis of Foreign Investment in Primary Market for China NPL [外资投资中国不良资产 一级市场分析]." KPMG, 2020, [assets.kpmg/content/dam/kpmg/cn/pdf/zh/2020/03/market-analysis-foreign-investment-chinese-npa.pdf](https://assets.kpmg/content/dam/kpmg/cn/pdf/zh/2020/03/market-analysis-foreign-investment-chinese-npa.pdf).

<sup>28</sup> "Analysis of Foreign Investment in Primary Market for China NPL [外资投资中国不良资产 一级市场分析]." KPMG, 2020, [assets.kpmg/content/dam/kpmg/cn/pdf/zh/2020/03/market-analysis-foreign-investment-chinese-npa.pdf](https://assets.kpmg/content/dam/kpmg/cn/pdf/zh/2020/03/market-analysis-foreign-investment-chinese-npa.pdf).



KPMG helped 29 banks with valuations and due-diligence of 6 billion RMB worth of NPLs. The graphic below represents the average recovery ratio drawn from the evaluations of these NPLs. We can see that the price of NPL packages tends to be higher in the coastal areas.

Exhibit 16: NPL Recovery Ratio Analysis for NPL Transactions in Primary Market (2014-2017)<sup>29</sup>



Source: KPMG

## 4.2 Secondary Market

After the AMCs purchase NPL packages from banks, they try to sell off underlying collateral that is easy to liquidate. Next, they repackage the NPLs and solicit buyers interested in purchasing those NPLs either individually or in bulk through auction. The resale of non-performing loans is called the secondary market. Main buyers who are interested in these packages or individual loans include other provincial AMCs, local AMCs, private equity firms, individual investors, and law firms.

<sup>29</sup> “Analysis of Foreign Investment in Primary Market for China NPL [外资投资中国不良资产 一级市场分析].” KPMG, 2020, [assets.kpmg/content/dam/kpmg/cn/pdf/zh/2020/03/market-analysis-foreign-investment-chinese-npa.pdf](https://assets.kpmg/content/dam/kpmg/cn/pdf/zh/2020/03/market-analysis-foreign-investment-chinese-npa.pdf).

The secondary market exists for a few reasons. The packages sold by banks to state-owned national AMCs are often too large for participants in the secondary market to acquire. Also, the participants in the secondary market have specialties that enable them to achieve a higher recovery ratio than the state-owned AMCs. For example, private equity firms purchase NPLs from companies that are in the line of business in which they usually invest. After acquiring the NPLs, they would help to restructure the companies, seek economic profit through forming synergies with their portfolio companies, and recover the loans once the business gets back on track. Thus, these investors in the secondary market would be willing to pay a higher price than the national AMCs.

The recovery of NPLs usually involves legal complications. Law firms have a better assessment of the possibility of recovery as well as an advantage in being able to clean up the complex ownership entanglements involved to achieve a higher recovery rate of the NPLs.

Investors leverage their professional skills to handle the recovery of NPLs. For example, investors who are experienced with residential real estate management would purchase NPLs with residential real estate as underlying collateral. Depends on the cause of the previous insolvency, the buyer would leverage their experience in handling disputes over property rights, vacate tenants, renovate the property, and, most importantly, sell off the real estate to recover the loans. The NPL market in China has drawn interest from international investors who are specialized in handling distressed debt like KKR as well.

### 4.3 Methods for foreign investors to participate in China NPL market

The phase one trade deal between the U.S. and China has brought good news for foreign investors who are interested in participating in the China NPL market. Now foreign investors can apply for asset management company licenses that permit them to acquire NPLs directly from Chinese banks, beginning with provincial licenses.<sup>30</sup> With provincial licenses, foreign financial service suppliers can participate in the primary market and have access to a larger pool of higher quality NPLs. But there is a caveat. Currently, every province is allowed to issue up to two provincial AMC licenses. It is unclear if this restriction also applies to the provincial license issued to the foreign financial service supplier. If foreign financial service suppliers are also impacted under such restrictions, then they may not be able to get the provincial license in the province or city they want. They would also face the problem of adverse-selection because regions with the most active NPL trading activities and better selection of opportunity available may have no provincial license left to offer. In this case, foreign investors can enter into joint ventures with national AMCs or establish a wholly-foreign-owned non-licensed AMCs in China. Chinese authorities approved two such AMCs in the Shanghai Free Trade Zone in 2017 and 2018.<sup>31</sup>

Foreign investors without AMC licenses can purchase NPLs on a non-bulk basis from commercial banks, or on a bulk basis from the secondary market. A cross-border NPL pilot program was set up in Shenzhen by the State Administration of Foreign Exchange (SAFE) in 2017. This program allows foreign investors to purchase single NPLs or NPL packages directly

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<sup>30</sup> Neagle, Anne-Marie, et al. "China's NPL Market: Implications of the China-U.S. Trade Deal." *King & Wood Mallesons*, 9 Mar. 2020, [www.kwm.com/en/knowledge/insights/chinas-npl-market-implications-of-the-china-us-trade-deal-20200309](http://www.kwm.com/en/knowledge/insights/chinas-npl-market-implications-of-the-china-us-trade-deal-20200309).

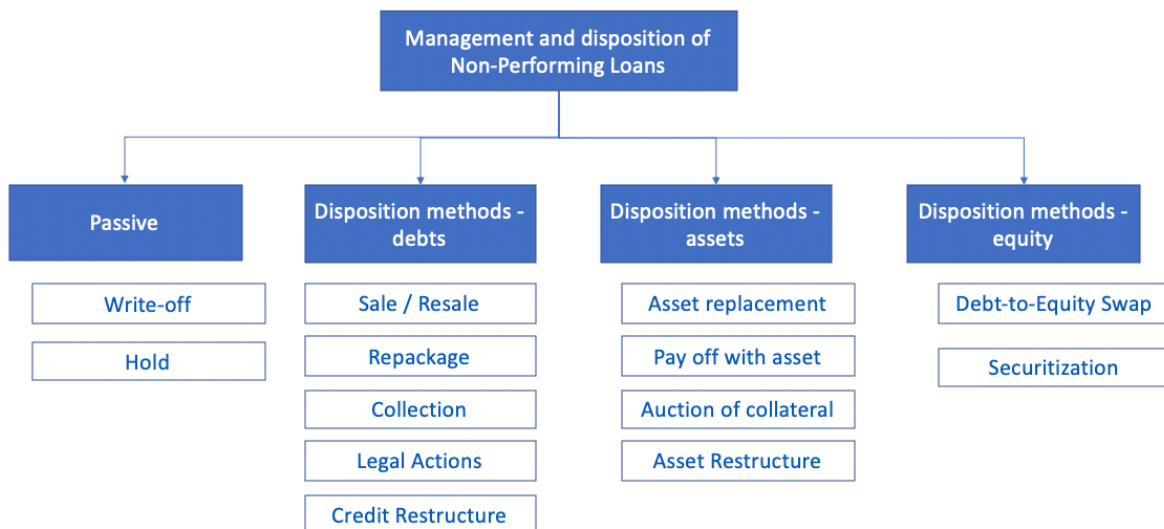
<sup>31</sup> Mazzochi, Richard, et al. "China's NPL and ABS Markets: A Guide to Foreign Investors and Financiers – Part I." *King & Wood Mallesons*, Apr. 2019, [www.kwm.com/en/hk/knowledge/downloads/2019/china-non-performing-loans-market-0410](http://www.kwm.com/en/hk/knowledge/downloads/2019/china-non-performing-loans-market-0410).

from AMCs that list their NPL portfolio on the Qianhai Financial Assets Exchange (QEX). Investing in NPL ABS can be done by foreign investors via established schemes like QFII and RQFII schemes, CIBM Direct Access Scheme, and Bond Connect.<sup>32</sup>

## 5 Handling of Non-Performing Loans

Financial institutions in Europe and the U.S. historically have had more experience with the disposition and management of NPLs. During the early 2000s, asset management firms in China brought in international experts to assist with the management and disposal of NPLs. Twenty years after the set-up of state-owned AMCs, now local experts have accumulated knowledge and experience when it comes to evaluating or disposition of NPLs. The strategies commonly used to handle NPLs can be split into four categories.

Exhibit 17: Methods for NPL Disposal & Management



<sup>32</sup>Mazzochi, Richard, et al. “China’s NPL and ABS Markets: A Guide to Foreign Investors and Financiers – Part I.” *King & Wood Mallesons*, Apr. 2019, [www.kwm.com/en/hk/knowledge/downloads/2019/china-non-performing-loans-market-0410](http://www.kwm.com/en/hk/knowledge/downloads/2019/china-non-performing-loans-market-0410).

Source: Zero2IPO

## **5.1 Passive**

### **5.1.1 Write – off**

Write-off is a method used by banks to recognize loans that are highly unlikely to be recovered. The loans are removed from the balance sheet, and 100% of the loss is reflected in the income statement. This method is quick and can apply to all sorts of loans. The benefit is that, after the loan write-off, the balance sheet would look healthier with a lower ratio of NPLs. The downside is that bank earnings are negatively impacted.

### **5.1.2 Hold**

Banks could choose to hold on to NPLs if they expect the loans to become performing within the foreseeable future. However, this “do nothing” approach also has implications for profitability. The capital used to fulfill liquidity requirements due to NPLs could otherwise be used to generate potential interest or profit. Banks also forego the time value of money they could otherwise have earned by selling off NPLs earlier.

## **5.2 Disposition methods for debts**

### **5.2.1 Sale / Resale**

Sale is the simplest and easiest method used to dispose of NPLs. The balance sheet of the bank would look better after the sale as the NPL. In addition, the income statement will be less adversely impacted compared with a write-off as NPLs sold through this method usually offer some recovery rate. However, this recovery depends on buyers' willingness to pay.

This method is mainly used by state-owned and provincial AMCs as they have an advantage in purchasing NPLs at a higher discount in the primary market. The state-owned AMC usually pays 30% to 50% of the book value for NPLs according to a report released by China Orient Asset Management Corporation in 2018.<sup>33</sup>

### **5.2.2 Repackage**

As mentioned before, the NPL packages sold by banks are usually too large to be taken by investors in the secondary market. As a result, the AMCs break apart the NPL packages, classify and evaluate the loans by underlying collateral type, riskiness, or other criteria, and sell off the loans individually or as a new package. Because of greater flexibility in structuring packages, loans could be sold at a higher price using this method when compared with a direct re-sale.

The sales of NPLs are usually made through auctions, biddings, competitive negotiations, and agreement-based transfers. The first three methods are suitable for NPLs that have high market demand and high value. An agreement-based transfer is used when it is difficult to find a buyer in the market because the NPL is difficult to recover or the recovery timeline is long.

### **5.2.3 Collection**

Besides sales and repackaging, investors can break apart the NPL and resolve disputes related to the ownership of underlying collateral to collect payments. Investors can go after the debtor directly or find a third-party service provider to help collect the repayment of debt. This

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<sup>33</sup> Li, Yumin. "Oriental Assets Survey Report: The Price of Non-Performing Asset Packages Is High [东方资产调查报告：不良资产包价格虚高 有机构助推]." Sina, 13 Apr. 2018, [finance.sina.com.cn/roll/2018-04-13/doc-ifyuwqfa0099128.shtml](http://finance.sina.com.cn/roll/2018-04-13/doc-ifyuwqfa0099128.shtml).

method is suitable for debtors who are facing difficulty with operating their business but have not fully lost their ability to repay the debt.

#### **5.2.4 Legal Actions**

When collecting payment of a loan is difficult, the creditor could pursue collection through legal action. Sometimes the original debtor may hide their assets under the name of their relatives, another corporation, or refuse to repay the debt. The creditor could then pursue legal action for compulsory execution for repayment of debts.

#### **5.2.5 Credit Restructuring**

A simple situation of credit restructuring occurs when the original debtor and creditor modify the terms of the loan through negotiation or based on a court order. The creditor may agree to change the terms of the original loan like extend the due date, change the payment frequency, or adjust the interest rate. Sometimes this process involves a third party to take over the loan and proceed with the negotiation with the debtor for a new loan. Under this circumstance, the NPL will be transferred to the new creditor. The new creditor would assess the financial condition of the original debtor, restructure and negotiate the terms with the original debtor to form a new credit agreement. As this process is more complex, the recovery timeline for credit restructure is typically longer than simply selling off collateral.

### **5.3 Disposition methods for assets**

#### **5.3.1 Asset replacement**

Asset replacement occurs when the controlling shareholder uses cash or other assets to replace the non-performing asset of the company.

#### **5.3.2 Pay off with assets**

When the business of a debtor is on the brink of bankruptcy or has stopped operations, the debtor usually will not have enough cash to repay outstanding loans. Under this circumstance, the creditor may agree with the debtor to pay off the remaining debt with assets.

#### **5.3.3 Auction of collateral**

When the debtor is not willing to or does not have the ability to repay the debt, the creditor has the right to entrust an auction agency to sell off collateral and take the proceed as loan recovery.

#### **5.3.4 Asset restructure**

Asset restructure includes mergers and acquisitions, bankruptcy restructuring, and asset improvement. Asset improvement is mainly used to upgrade real estate assets like old commercial real estate, manufacturing parks, and hotels. The NPL owners hope to cut down the operational costs and attract more revenue with asset improvement projects in order to recover the loan.



## 5.4 Disposition methods of equity

### 5.4.1 Debt-to-Equity Swap

The implementation of debt-to-equity swaps in the Chinese NPL market first happened in 1999. After the five state-owned AMCs took over NPLs from state-owned banks, they completed 405 billion RMB worth of debt-to-equity swaps for more than 580 corporations.<sup>34</sup>

Again in 2016, the government promoted the use of debt-to-equity swaps for corporations from emerging industries of strategic importance. The main participants were the state-owned banks, but the banks could not participate directly in the debt-to-equity swap. They had to sell off and transfer the liability to a third party. In 2018, the National Development and Reform Commission, PBOC, Ministry of Finance, and CBIRC jointly released several notices and guidelines to promote the use of debt-to-equity swaps to deleverage corporations.<sup>35</sup> Financial institutions were allowed to set up funds to invest in these debt-to-equity swaps.

### 5.4.2 Securitization

Chinese regulators restarted securitization of NPLs into asset-backed securities in 2016 with a pilot program. In April 2016, the National Association of Financial Market Institutional Investors (NAFMII) issued enhanced information disclosure guidelines for NPL ABS products. Although only a small percentage of NPLs are securitized as ABS, examining the performance of ABS may provide investors with valuable information on the NPL market in general. Exhibit

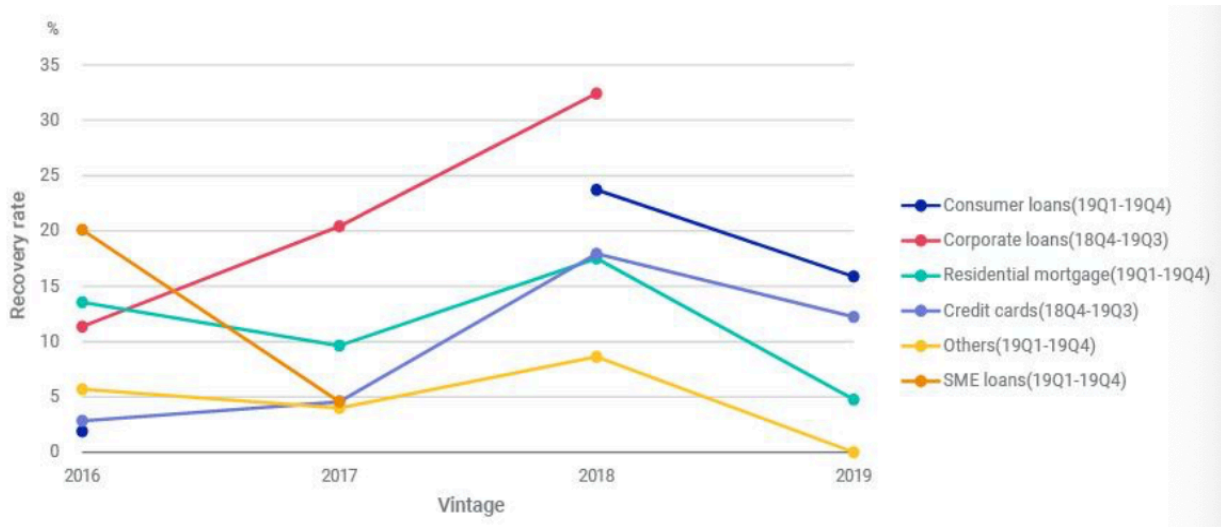
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<sup>34</sup> “Sinolink Securities: The Background, Experience and Enlightenment of Debt-to-Equity Swap in 1999.” *Shanghai Securities News*, Sinolink Securities Research, 13 Oct. 2016, [news.cnstock.com/news/zxk-201610-3918722.htm](http://news.cnstock.com/news/zxk-201610-3918722.htm).

<sup>35</sup> Song, Yan. “Debt-to-Equity Swaps Reached More than 900 Billion Yuan, the General Meeting of State Council: Explore the Participation of Public Fund, and Encourage Foreign Capital to Invest in Participating Agencies [债转股落地超 9000 亿, 国务院常务会: 探索公募资管参与, 鼓励外资入股实施机构.]” The State Council of The People's Republic of China, 23 May 2019, [www.gov.cn/zhengce/2019-05/23/content\\_5393964.htm](http://www.gov.cn/zhengce/2019-05/23/content_5393964.htm).

18 shows that the recovery rates across different categories of ABS are very low and have decreased in 2019.

Exhibit 18: 2019 Recovery Rate of NPLs By Vintage<sup>36</sup>



Source: MSCI, CNABS

## 6 Pros and Cons of Investing in China NPL market

There are a few benefits of investing in NPLs. First, investing in NPL is counter-cyclical. When the economy is going through a downturn, the supply of NPLs increases, buyers have more negotiating power, and investing in NPLs at this time could generate a higher return compared with other investments.

Second, the product offering is diverse. The types of loans include personal loans, credit card cash advances, mortgages, corporate loans, etc. The types of underlying collateral also varies.

<sup>36</sup> Chen, Jian, and Yini Yang. "Trade Deal Broadened Access to China's Nonperforming Loans." MSCI, 29 Jan. 2020, [www.msci.com/www/blog-posts/trade-deal-broadened-access-to/01695014835](http://www.msci.com/www/blog-posts/trade-deal-broadened-access-to/01695014835).

Some examples are real estate, land, factory, machinery, intellectual property, equity, accounts receivables, etc. These different types of loans and underlying collateral enable investors to pick and choose the kind of risk and return that suits their needs the best. Investors could also purchase NPL ABS if they do not want to get involved directly in NPL disposal and handling.

Investors should also be aware of the potential shortcomings of investing in NPLs.

First, NPLs are not standardized financial products. They are generally not traded over exchanges except for NPL ABS. NPLs are relatively illiquid compared with other exchange-traded financial products like stocks or ETFs. Second, NPLs are challenging to evaluate. As the trading of NPLs is usually off-exchange, it is hard for investors to gather historical prices for similar transactions to draw comparisons. For NPLs that are sold as a package, the underlying loans may have different terms, conditions, and collaterals. Thus, the evaluation of NPLs is complicated and time-consuming. Third, the recovery timeline for NPL is two to five years. The long recovery timeline makes it not suitable for those investors with high liquidity requirements. Fourth, the cost related to loan recovery is high. Investors usually need to pay for legal consultation during the workout and recovery process of NPLs. To recover the NPLs, investors sometimes need to settle disputes over the ownership of underlying collateral before they can sell off the assets or use other workout strategies to recover the loan. Investors may also need to rely on the court to enforce repayment of the debt, or order a company to liquidate or restructure.

Regulators are constantly improving the methods to help with the efficiency and transparency of NPL disposals. Almost all Chinese courts have registered on the judicial sales platform of Taobao since the service was launched in 2012. The turnover on Taobao judicial

sales platform was about 1.3 trillion RMB with 566,000 items auctioned.<sup>37</sup> These changes made the market fundamentally more attractive environment for NPL investors.

But some investors had difficulty in meeting their target investment return. Most foreign investors are targeting a 13% to 15% unlevered internal rate of return. By adding leverage, the IRR can be levered to more than 17%.<sup>38</sup> But the return they received was single digit for the investments made. There are a few common reasons for this outcome. Some investors are too optimistic with the recovery process and timeline when they first enter the China NPL market. Others may rely on third party service providers that are inexperienced or incapable. As domestic liquidity decreased since mid-2018, servicers who wished to recover NPL through resale faced difficulty. Although IRR was not as high as expected with rumors flowing around with regards to portfolio return, PwC was aware of 13 international investors that closed 14 deals in 2019. The capital invested in China NPL from foreign investors is estimated to be \$1.1 billion.

## 7 Conclusion

The Chinese government has put in efforts to continuously improve and develop the China NPL market. With the changes implemented in the past twenty years, the current market fundamentals have improved dramatically with solid loan documentation, properly registered collateral, fast and predictable legal system, and banks better with handling legal proceedings.<sup>39</sup> With the increasing NPL balance, improved market fundamentals, and encouragement for local

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<sup>37</sup> Xiaoxia. "Across China: When Judicial Auctions Meet Livestream Shopping." Xinhuanews, 18 Dec. 2019, [www.xinhuanet.com/english/2019-12/18/c\\_138640194.htm](http://www.xinhuanet.com/english/2019-12/18/c_138640194.htm).

<sup>38</sup> "The Chinese NPL Market in 2020 - PwC." PwC China, 2020, [www.pwccn.com/en/deals/publications/the-chinese-npl-market-in-2020.pdf](http://www.pwccn.com/en/deals/publications/the-chinese-npl-market-in-2020.pdf).

<sup>39</sup> "The Chinese NPL Market in 2020 - PwC." PwC China, 2020, [www.pwccn.com/en/deals/publications/the-chinese-npl-market-in-2020.pdf](http://www.pwccn.com/en/deals/publications/the-chinese-npl-market-in-2020.pdf).

and foreign investors to participate in the China NPLs market from the government, in my opinion, China NPL market would present interesting investment opportunities in the future.

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