China GREs

Primer: China government-related entities (GREs) – same, same but different

Primer

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Government-related Entities

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Reference reports:

Chinese SOE bonds – A primer by Joyce LIANG. Sept'14

China LGFV primer ; by Joyce LIANG, Sirius CHAN, Ingrid HSU. AUG.'16

China: Domination & Differentiation: Understanding the Chinese 'Big 5' by Lefu LI. Sept'16

Non-Banks Financial Institutions - China: AMCs: Evolving on a bumpy road by Lefu LI. NOV.'16

Our China GREs universe: FIs, SOEs and LGFVs

With an outstanding dollar bond size of USD315bn and c. 20% of the emerging market (EM) USD bonds, Chinese government-related entities (GREs) have been under the spotlight in EM bonds market. For the purpose of our primer, we consider an entity 'government-related' when a government, either at the national, regional or local level, has sufficient control over the entity for a parent/ subsidiary relationship to be present. We segregate the GREs universe into three: Chinese financial institutions (FIs), State-Owned Enterprises (SOEs), and Local Government Funded Vehicles (LGFVs).

What makes a GRE and how to differentiate them?

Govt. ownership, whilst being an important indicator, does not alone determine whether an issuer is a GRE. In our framework for what issuer should be classified as a GRE, the issuer should also have (1) an implied admin-level, explained in report, and (2) be managed by a double-parallel system –administration and the CPC, in addition to government ownership. We also provide a framework on how to differentiate the GREs based on their (1) roles and functions, (2) regulation /supervision, and (3) transparency.

Why do GREs issue USD bonds, who are the investors?

We identify the key **supply** drivers of USD bond issues by GREs as (1) USD funding needs, (2) onshore / offshore cost consideration, (3) ability to issue longer duration and (4) Basel III and investment needs for FIs. This is however tempered by govt restrictions, e.g. National Development and Reform Commission quota. On the **demand** side, drivers depend on the investor base which can vary for different types of GREs. We compare the investors' base based on new issue data since 2004. We draw some interesting conclusions e.g., a home bias for Asia investors and high cross-subscription in FIs.

How do rating agencies evaluate GREs with gov't support?

We review the methodologies of three rating agencies for GREs, and highlight the key drivers. This exercise seeks to explore how the rating agencies may make adjustments for government support when they assign credit ratings to China GREs, especially for the ones with weak fundamentals but strong perceived gov't support.

How does gov't support work for GREs?

As government support is the key to understanding GREs, we give a detailed analysis on 1) the government ownership, with focus on the Huijin model for FIs, and evolving State Capital Investment model for Central SOEs; 2) the funding advantage of GREs in onshore market; and 3) strategic industries identified by the State-owned Assets Supervision and Administration Commission.

What is the typical bond structure for GREs?

We present three main structures: 1) onshore holdco keepwell structure, 2) direct issuance structure; and 3) onshore holdco guarantee structure. We also briefly discuss the standby letter of credit structure despite low issuances expected in the future.

Evolution of GREs

Based on policy cycles, e.g., fiscal stimulus after the 2008 crisis, the evolution of GREs is interpreted into three periods. We list some default cases in the three sectors in Appendix to show the drivers policy loosening/tightening in the past.

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Acronyms

AMC: Asset Management Company
Admin-level: Administration levels
BCA: baseline credit assessment
CCDC: China Central Depository & Clearing Co., Ltd.
CCDI: Central Commission for Discipline Inspection
CBIRC: China Banking and Insurance Regulatory Commission
CBRC: China Banking Regulatory Commission
CBS: Central Bank Bills Swap
CIC: China Investment Corporation
CIRC: China Insurance Regulatory Commission
CSRC: China Securities Regulatory Commission
CPC: Communist Party of China
CIC: China Investment Corp
CDB: China Development Bank
CSRC: China Securities Regulatory Commission
FAI: Fixed asset investment
FI: Financial Institution
GRE: Government-related entity
GRI: government related issuers
HDB: Hana Nana Development Bank
Holdco: Hold company
ICR: issuer credit rating
IDR: Issuer default rating
JDA: joint default analysis
LGFV: Local Government Funded Vehicle
MoF: Ministry of Finance
MTN: medium term notes
NBFI: non-banking financial institution
NDRC: National Development and Reform Commission
Opco: Operating company
POE: Privately owned enterprises
PBoC: People's Bank of China
SACP: standalone credit profile
SASAC: State-owned Assets Supervision and Administration Commission
SBLC: standby letter of credit
SCI: State Capital Investment
SCP: standalone credit profile
SDR: Special Drawing Right
SOE: State-Owned Enterprise
SOS: Spread over Sovereign
VR: viability rating

ICE BofAML Indices in this report

Asian index family

ACIG index: ICE BofAML Asian Dollar Investment Grade Corporate Index (incl. financials)

ACOR index: ICE BofAML Asian Dollar Corporate Index (including financials)

ANFN index: ICE BofAML Asian Dollar Non-Financial Index

ACIG index: ICE BofAML Asian Dollar Investment Grade Corporate Index

AFIN index: ICE BofAML Asian Dollar Financial Index

ASEN index: ICE BofAML Asian Dollar Senior Financial Index

ALT2 index: ICE BofAML Asian Dollar Lower Tier 2 Financial Index

AT10 index: ICE BofAML Asian Dollar Tier 1 Financial Index

Global and EM index family:

EMCB index: ICE BofAML Emerging Markets Corporate Plus Financial Index

EMIB index: ICE BofAML High Grade Emerging Markets Corporate Plus Index

EMGB index: ICE BofAML Emerging Markets External Sovereign Index

COCO index: ICE BofAML Contingent Capital Index

CF00: ICE BofAML US Financial Index

COXL: ICE BofAML US Corporate Excluding Banking Index

Significance of China's GREs

Definition of GREs

In this primer report, we will discuss Chinese government-related entities (GREs) as bond issuers in USD bond market. For the purpose of our primer, we consider an entity "government-related" when a government, either at the national, regional or local level, has sufficient control over the entity for a parent/subsidiary relationship to be present. Typically, this is indicated by the government having majority (direct and/or indirect) economic (minimum of 20% stake) or voting control over the entity.

Based on our estimates, GREs account for about one-fifth of the EM USD credit space. With the growing market share, GREs have been an important investment theme in the EM credit investment space since 2015. More specifically, the GREs include the following three parts.

State-owned financial institutions (FIs): A majority of Chinese financial institutions as USD bond issuers could meet our criteria of GREs, namely being government-controlled with government holdings above 20%. These include (1) most Chinese banks, including the policy banks, the Big 5 banks, and most joint-stock banks; (2) the Chinese non-bank financial institutions, including the four national asset management companies (AMCs), and most leasing companies, partially or fully owned by the Big 5 banks. In terms of instruments, those GREs' bank seniors bonds, tier-2 bonds, AT1 and non-bank financial institutions' (NBFIs) dollar bonds are all included in our GREs' data, and are referred as *FIs* later when we conduct the index analysis the benchmark or investor base of GREs.

Local government funding vehicles (LGFVs): LGFVs are companies set up by local governments, their departments or their agencies through asset injections such as capital and land for the purpose of raising funds for public infrastructure projects. They are independent economic entities with legal personality. Given their clear policy role to 7promote social and economic development of the region through provision of public services and/or developing infrastructure, these companies tend to be weak in profit generation and have high debt levels. Operations of such companies rely significantly on support from local governments through periodic subsidies, grants and asset injections. Based on their rating, we divide LGFVs into investment grade (IG) LGFV and high yield (HY) LGFV.

China state-owned enterprises (SOEs): Other than LGFVs, the rest of the corporate issuers in the GREs space are SOEs. Based on their systemic importance, we classify SOEs into three categories: the first-tier SOEs (1st tier SOEs), which are more like quasi-sovereign issuers, including three oil majors, two power grid companies, and two power generation companies. They have a long issuance track record since as early as the mid-2000s and are rated at 'high A', with solid fundamentals. The second tier SOEs (2nd tier SOEs) are still A rated, but they appear less important in various industries, some are less systemically important than oil and power. The last group is BBB SOEs, or as the name implies are *BBB-rated SOEs* with weaker fundamentals.

Table 1: Sub-groups of SOEs based on our RV framework

	Description	Tickers within the sub-group
1st SOEs	Quasi sovereign status with A rating. Oil and power sectors	CHGRID SINOPE CNOOC SOPOWZ SDIC YANTZE CNPCCH SINOPC
2nd SOEs	A rating but less systematically important. Diversified sectors allocations.	CHGDNU CHCONS SINOCH RLCONS CHIRES KUNLEG COSHOL POWINV SHENG
BBB SOEs	Weaker fundamentals and less important SOEs in various sectors	CITLTD HAOHUA CHRAIL CHSCOI CMHI COSL MINMET CHITRA COFCO SININT CHMEDA CHMETL CNBG BAORES CGGCN

Source: BofA Merrill Lynch Global Research;

Distinction between LGFVs and SOEs

LGFVs have many similarities with local government-owned SOEs; however, LGFVs are more policy-driven, while SOEs are more profit-driven. Usually, LGFVs only operate in more concentrated industries, which mainly support local governments' economic development strategies, e.g. infrastructure building. Meanwhile, SOE industries are more diversified across manufacturing, commodities, real estate, etc. Regarding funding, LGFVs are less diversified than SOEs, and may face more constraints since 2018. It could be easier for SOEs to give commercial banks financing, as corporate loans are a standard service for the banks. A majority (typically 100%) of LGFV revenue income, as well as receivables, is usually from local governments. In contrast, SOEs have a more diversified customer base than LGFVs. We listed one of the onshore rating agencies opinions in the following table to distinguish LGFVs vs. SOE as a reference to the investor.

Table 2: Key difference between LGFVs vs SOEs

	SOEs	LGFVs
Responsibility	Support important industries with national strategic importance for the economic development and social stability	Primarily act as an extension of government functions while operating some market-oriented businesses
Business	Aerospace, shipping, military, petroleum, chemical engineering, heavy equipment and industrial machines, electronics, non-ferrous metals, etc.	Land development, infrastructure construction, water, heating, public transportation, etc.
Operation	Market-oriented, responsible for their own profits and losses	Rely on earnings from profitable businesses and/or government subsidies to support daily operations
Profit target	Profit focus to preserve and increase the value of state assets	Not profit focus but mainly to support local governments' policies and missions
Staff size	Generally large	Relatively small

Source: Lianhe Global, *QPIG- Is it a LGFV or SOE?* By Alex Kung, 26 FEB.'19.

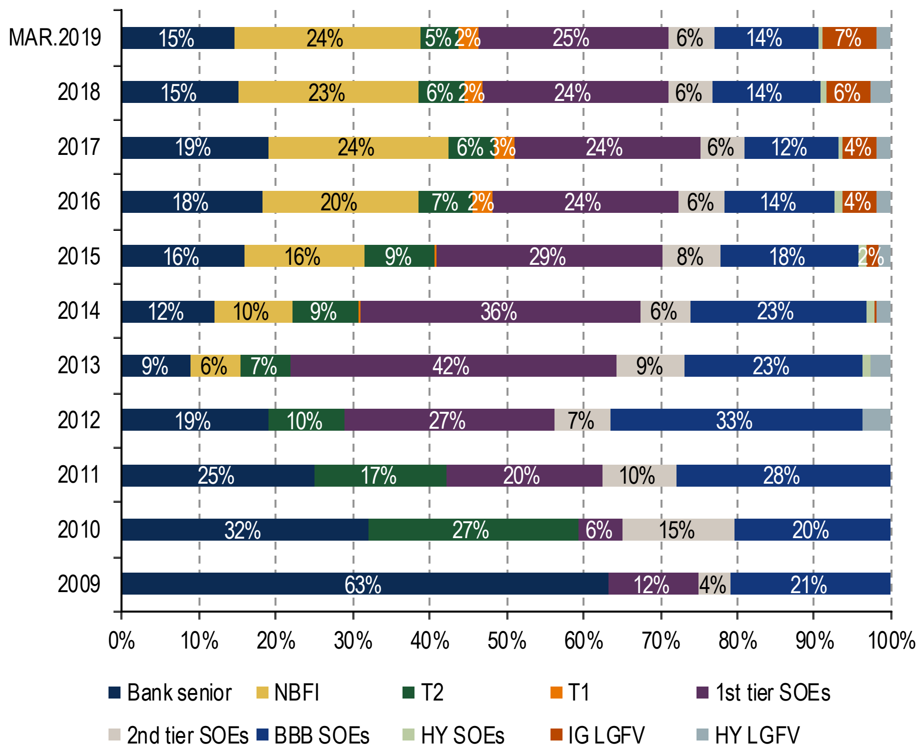
Significance of GREs in USD bond market

Outstanding size of Chinese GRE dollar bonds

Based on the ICE BofAML Emerging Markets Corporate Plus Financial (EMCB) index, the size of Chinese GREs is about USD260bn, nearly 20% of the whole EM space by end-March'19. Of this USD260bn, FIs and SOEs are about 45% each, and LGFVs nearly 8%. In terms of subcategory, the universe became more diversified after 2016. The substantial segments are NBFIs (24% of GREs in March'19), 1st tier SOEs (25%) and IG LGFVs (7%) for each of the three categories. While BBB SOEs and banks senior bonds are also important sectors, at nearly 15% of each in GRE universe. We summarize other main characteristics of this market below.

The actual universe of Chinese GREs' USD bonds could be more than USD 315bn at end-April'19. Due to the benchmark rules, most Chinese banks' AT1 are not include in the EMCB benchmark, with total outstanding size at about USD 43bn, substantially higher than the USD 6.45bn GREs AT1 in the EMCB benchmark; similarly for the LGFVs, based on our estimation, the total outstanding amount was USD 42bn at end-April'2019, which means about USD 21bn LGFVs are not included in the benchmark.

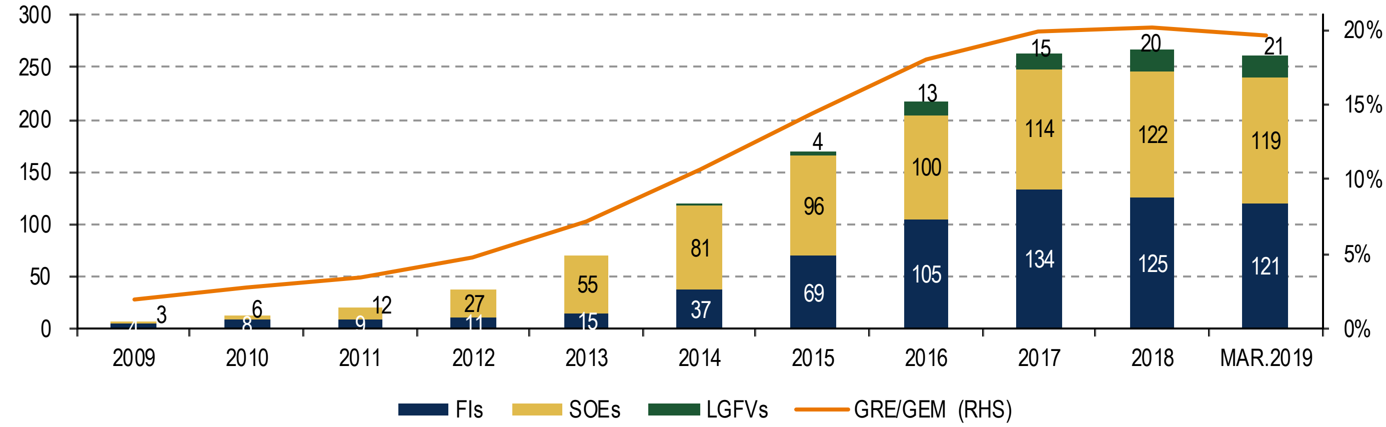
Chart 1: The composite of GRE universe, more diversified now than 2019



Source: BofA Merrill Lynch Global Research; As of end-April 2019

The growth of the GREs was dramatic, from USD7bn in 2009 to USD263bn in 2017. The compound annual growth rate was about 57%. After 2017, the size of GREs stabilized along with (1) China onshore deleveraging to limit the debt level of SOEs; and (2) strengthening regulation and supervision to make overseas expansions more difficult than before. As main triggers of the increasing supply, we identified the following – onshore/offshore funding cost difference, and USD funding needs based on one-off policy initiatives or long-term operational needs. For details, please see our Supply and Demand session later (page 21/ Key drivers for the supply of USD bond by GREs are (1) USD funding needs for operation and overseas expansion, (2) funding cost differential between onshore and offshore issuance; (3) ability to issue for longer duration in the offshore market, (4) for FIs, the Basel III-related-capital needs, and the investment as well as diversification needs. Despite commercial considerations, the ability for GREs to issue offshore could however be limited by government restrictions, generally imposed through the NDRC quota.).

Chart 2: China GREs account for c. 20% of GEM now vs. 2% in 2009, with total par value at c. USD260bn

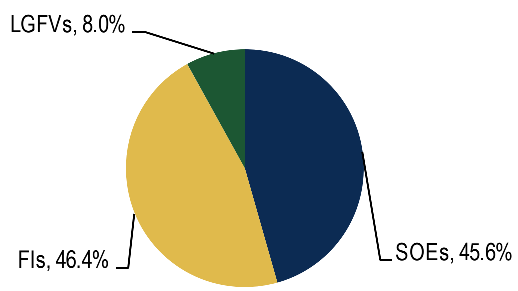


Source: BofA Merrill Lynch Global Research

Sectors allocations, maturities and credit ratings

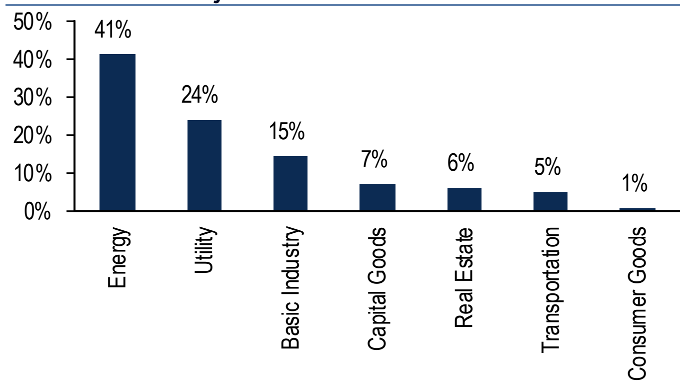
As of end-April'19, our China GRE universe's average duration was 4.3 years, shorter than that of EM credit bond index (EMCB index) at 4.7 years. The average spread and yield are lower as well at 169bp and 4.2% on average, respectively, vs. those EM credit at 265bp and 4.7%. The GRE universe has higher credit quality with average credit rating at A- (vs. EM credit at BBB on average); 36% of GRE instruments have the same credit rating as China sovereign ratings. We further break down the GREs by sector, the largest segment is FIs, accounting for 46.4%; SOEs, similar at 45.6%; and LGFVs is the smallest with 8% market share. In terms of SOEs, 65% of them are located in strategically important industries, such as energy and utility. Capital goods and basic industry account for 23% of the total. So, overall the SOEs are in capital-intensive sectors, thanks to their better access to funding.

Chart 3: Breakdown by FIs, SOEs and LGFVs



Source: BofA Merrill Lynch Global Research; As of end-April 2019

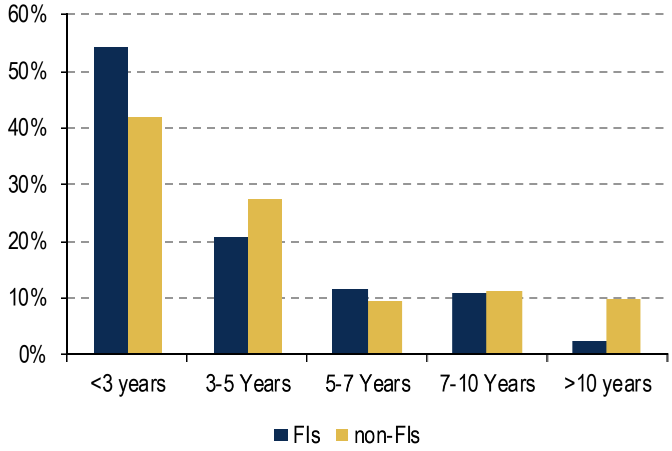
Chart 4: Breakdown by SOEs' sector



Source: BofA Merrill Lynch Global Research; As of end-April 2019

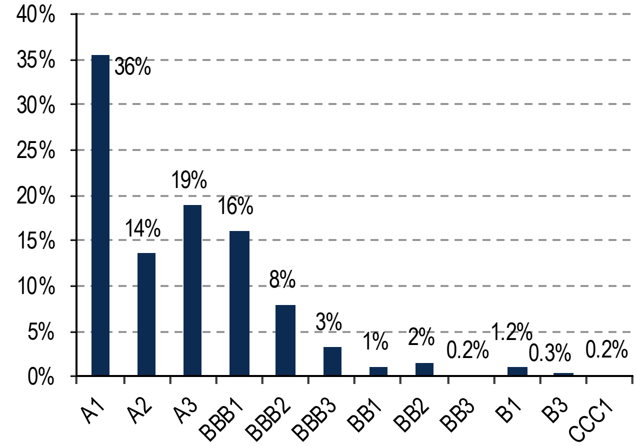
In terms of maturities, we compare FIs vs. SOEs/LGFVs, and find the duration of FIs is a little shorter – 54% of FIs have maturity within three years, vs 42% of SOEs/LGFVs. In the long-end of the credit curve, oil names in the GREs space issue 30-years seniors, which are the main driver for the 10% of the universe with duration above 10 years, vs 3% for FIs.

Chart 5: Breakdown by FIs vs non-FIs maturity



Source: BofA Merrill Lynch Global Research; As of end-April 2019

Chart 6: Breakdown by rating



Source: BofA Merrill Lynch Global Research; As of end-April 2019

GREs USD bonds: proxy of China sovereign dollar bonds

One reason for China GREs being an important theme in the EM investment space is the lack of China's sovereign external debt. USD bond investors could invest in GREs as a proxy of China sovereign external debt. Currently, the total outstanding of China's USD sovereign debt is only USD5bn by par value, 0.5% out of the index. This is much smaller than that of Indonesia, Sri Lanka and Korea at 6.9%, 1.3% and 0.6% in Asia, respectively (based on Emerging Markets External Sovereign Index, EMGB, end-April'19). Meanwhile, GREs account for more than 20% in the EM USD bond space, which is much higher than that of Indonesia, Sri Lanka and Korea at 3%, 0% and 7.3%, respectively (based on Emerging Markets Corporate Plus (EMCB) Index, end-April'19).

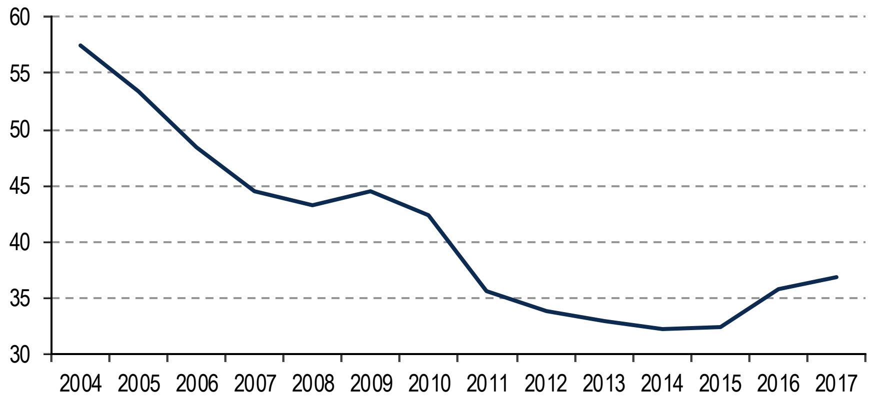
Significance of GREs in China's economy

Given the government ownership, most of the GREs will carry certain policy mandates, which reflect in their contributions into fixed-asset investment (FAI), fiscal revenue and employment. The contributions declined from late-1990s to around 2014, but are still substantial. From 2013 to 2015, several important SOE reform measures were mandated in China, including SOEs reform in 2013 to distinguish SOEs in competitive vs. uncompetitive sector, and support SOEs with strategic industries; as well as the supply side reform which benefited a lot of SOEs in the commodity sector. The reforms strengthened the position of SOEs, and partially reflected in the inflection point of FAI, shares of asset and profit, employment, and tax contribution. Such an inflection point is roughly in line with the market perception of "the state enterprises advance, the private sectors retreat" after the new round of China SOE reform. We used the SOEs as a proxy of our GREs due to statistical consideration.

FAI contribution

The FAI is one of the main drivers of GDP growth of China. While China SOEs' FAI contribution has seen a 2004-14 CAGR of 18%, lower that of the non-state sector growing at 32% for the same period; as a result, SOE share of FAI has declined from 58% to 33% over 2004-14. However, during the economic downturn in 2014-15, China's GREs started to play a more significant role in terms of stabilizing the economic growth.

Chart 7: China SOEs contribute % to FAI



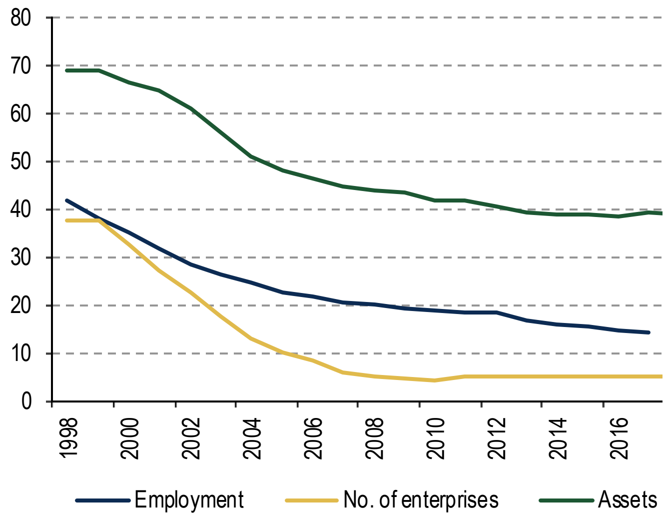
Source: BofA Merrill Lynch Global Research, Ministry of Human Resources and Social Security, CEIC;
* State Owned Enterprises (SOE) defined as non-financial enterprises owned by government or with government as its dominant stockholder

SOE share by asset, liability, profit and employment

With a similar pattern of FAI, SOEs' asset, liability, profit and employment were all on a downward trend, but stabilized in 2014 and thereafter. In terms of assets, despite the overall decline, SOEs still account for nearly 40% after 2014, the proportion is much higher than their contribution to employment at 14% and to the number of enterprises at 5% (18,760 SOEs in 2018). This suggests SOEs tend to be much larger and more capital intensive than non-state firms given their better access to low-cost funding. Before 2000, SOEs accounted for about 40% of the number of enterprises and employment, which were much higher than those in 2018.

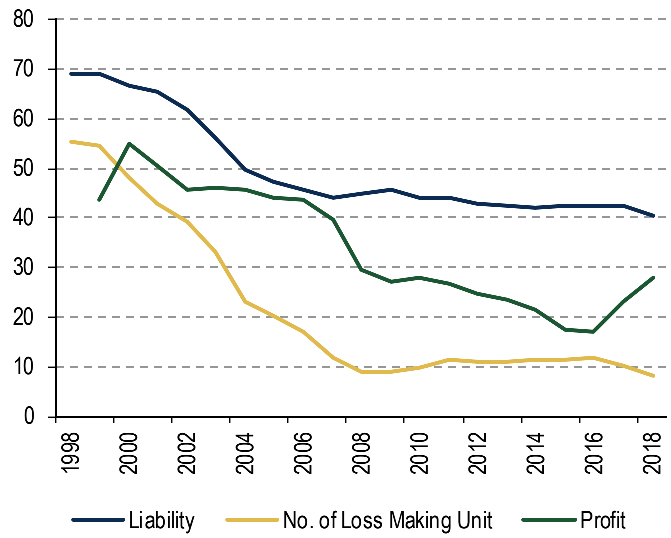
The years 2014 and 2015 were not only the inflection point of SOE FAI contribution but also the fundamental development of SOEs. Thanks to restructuring reform of the supply side and other deleveraging policies, we found a deleveraging trend after 2015 indicated by lower share of loss-making unites and total liability of SOEs, but meaningfully higher share of the profit of SOEs.

Chart 8: SOE share % of employment, no. of enterprise and asset



Source: BofA Merrill Lynch Global Research, Ministry of Human Resources and Social Security, CEI

Chart 9: SOE share % of liability, no. of loss making unit and profit



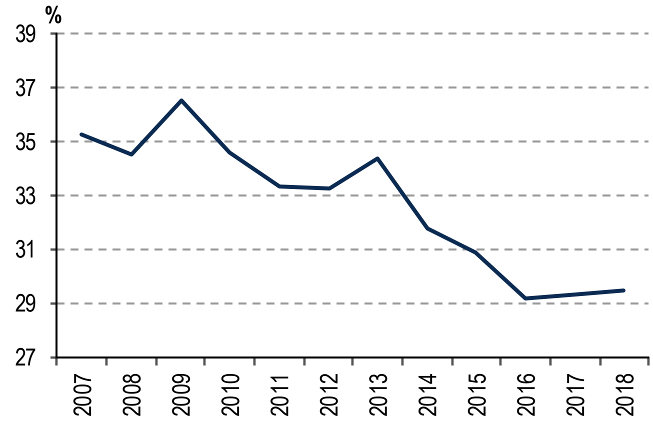
Source: BofA Merrill Lynch Global Research, Ministry of Human Resources and Social Security, CEIC;

Fiscal revenue contribution

Tax, dividend and employment contribution are the key performance indicators for senior management of central and local SOEs. In November 2013, the Chinese Communist Party announced a detailed reform plan for SOEs. It required Central SOEs to increase the dividend payout ratio to 30% by 2020 to replenish public funding for social security. A typical SOE currently pays 5-15% of its profits in dividends to the government.

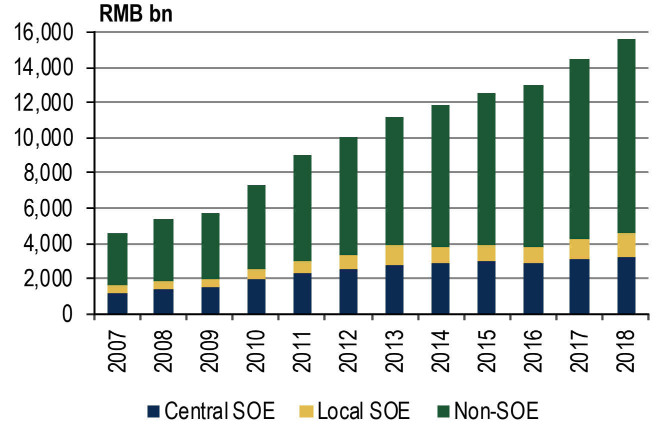
Currently, SOE/LGFV tax contribution is about 30% out of total government tax revenue, which is substantial in our view. It decreased from nearly 35% in 2007 to around 30% in 2016, but stabilized in 2017 and thereafter. In terms of the absolute amount, SOEs/LGFVs paid RMB4.6tn tax in 2018 with c.70% (RMB3.2tn) from less than 100 Central SOEs. Most dollar bond issuers are Central SOEs and their systemic importance could be reflected from their substantial contribution here. Although FIs are not included in the statistics by the Ministry of Finance (MoF), they are generally more profitable than corporate SOEs with higher ROEs, especially for the large banks. In 2018, the Big 5 paid more than RMB300bn as tax and around .USD140bn revenue to the government.

Chart 10: SOE's tax revenue contribution



Source: BofA Merrill Lynch Global Research, Ministry of Finance, CEIC;

Chart 11: Tax revenue of Central/Local SOEs and non-SOEs



Source: BofA Merrill Lynch Global Research, Ministry of Finance, CEIC

Similarities and differences

Similarities

In this section, we highlight the similarities of the GREs comprising: 1) GREs are government owned, 2) GREs have an implied admin-level, and 3) GREs are managed by a double-parallel system –administration and the CPC.

Government ownership and implicit government support

The GREs under our universe have many similar features but are primarily driven by their government ownerships. This government owned background implicitly benefits GREs in terms of the following.

1. **Better access to funding:** To access the onshore/offshore financing in bond/equity/loan market. Thus, the funding cost of GREs is substantially lower than private owned enterprises (POEs), helped by their higher credit ratings. At end-April'19, the weighted average yield of GREs was 3.9% vs. POEs' 4.3%. To compare, the 3-year government bond yield was 2.9% and AAA-rate credit bond yield was 4%. Interestingly, due to more short-term instruments issued from GREs, the tenor for GREs is only 2.4 years vs. POEs' 3 years.
2. **Direct support from the government:** SOEs in strategic industries, e.g., military, power, oil, telecom, coal and mining, used to have direct government support of capital injections. For instance, the government provided Sinopec with around RMB50bn in subsidies for losses in its refinery business in 2008, which arose from the government's control on refined oil prices. Similarly, SASAC made an equity injection of RMB1.2bn into each of five state-owned power generation groups as they were not able to pass through coal price increases to end-users given the National Development and Reform Commission's (NDRC) on-grid tariff controls to curb inflation.
3. **Indirect government support**: E.g., in March'19, CDB and some commercial banks provided long-term low-interest loans to swap the high cost funding of the LGFVs in ZHENJIANG city, JIANG SU province, and similarly, some local governments may ask local commercial banks to provide loan facilities for LGFVs and local SOEs in case of financial difficulties.

As a result, most GREs' bonds will have rating uplifts based on government support in the bottom-up approach. Meanwhile in the top-down approach, the Chinese government's credit rating at 'high A' is usually the starting point of the notching of a GREs' bond rating.

We have more detailed discussions on this in the later sections of *Government support* and *Rating methodology* with specific data and charts.

Role in administration system

Admin level in China

Most GREs implicitly will have a role with an implied admin level in the administration system, explained below. Their policy functions, shareholding structure and supervision can all be based on the implied admin level.

The administration framework in China is shaped by administration levels (admin level). For government officials, there are eight degrees of admin levels. Using the government officials classification as a basis, we believe the GREs can be broadly subdivided into five levels as per Designation 3 in the following tables. They are the comparable, implied admin levels of GREs.

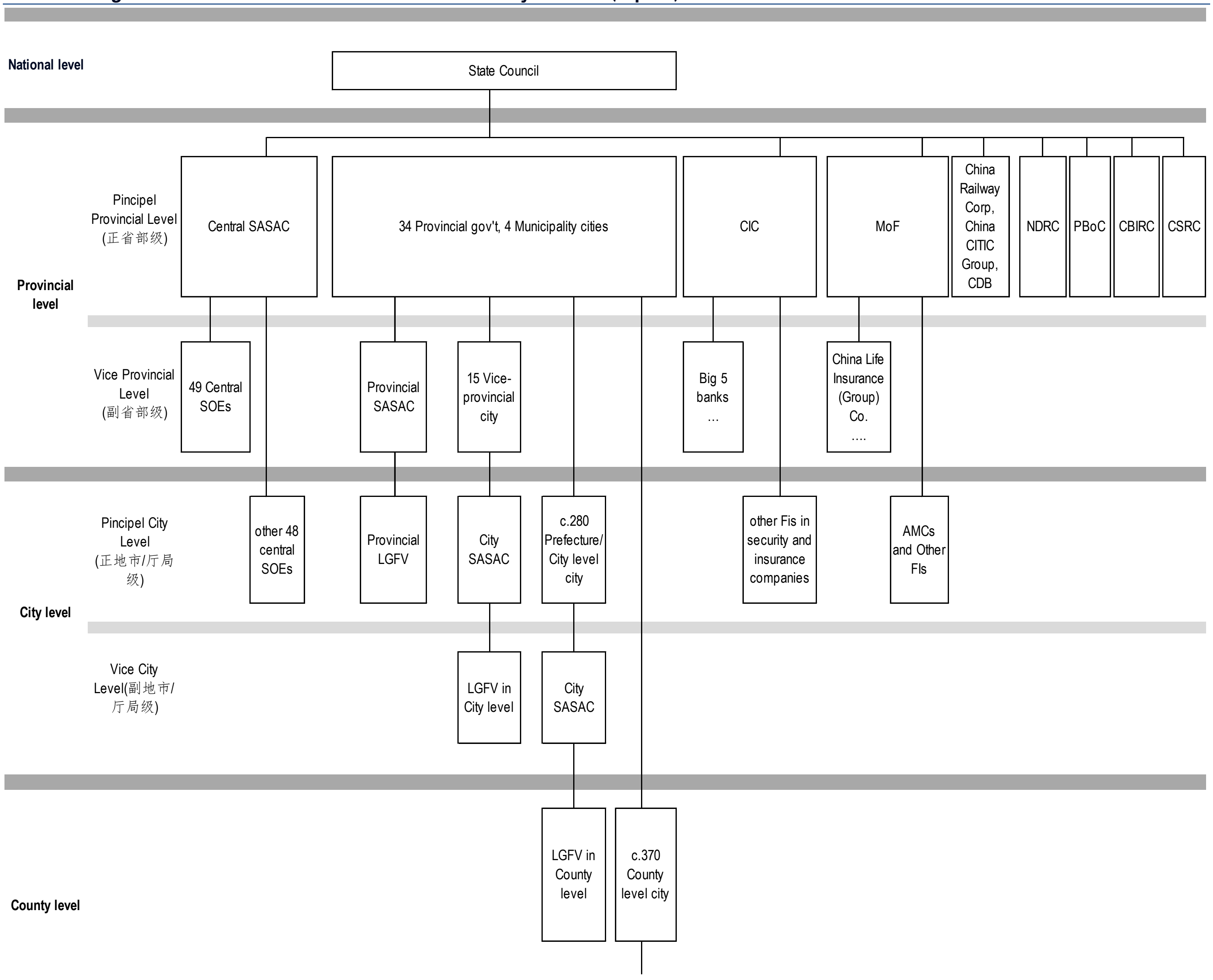
We list the major government entities and GREs below. We also explain each of the major level of admin system in Appendix 1, *Administrative system in China.*

Table 3: The designation we used for admin-level in this report

Designation 1	Designation 2	Designation 3 for this report and its GRE universe	
National	National level, a.k.a State Council level	No GRE	
Provincial	Provincial level, a.k.a Ministerial level	Principle Provincial	Only 4 GREs: CIC, CDB, CITIC GROUP, CHINA RAILWAY GROUP
		Vice Provincial	Big 5 banks, Top 4 insurers and c. 50 central SOEs,
Sub-provincial	City level, a.k.a department or bureau level	Principle City	c. 40 central SOEs, local SOEs and LGFVs, most of the FIs in GREs space
		Vice City	local SOEs and LGFVs
	County level, a.k.a section or division level	County level	local SOEs and LGFVs with little international bond issuers, no point to differentiate within the level

Source: BofA Merrill Lynch Global Research;

Exhibit 1: The government entities and GREs in the Administration system with (implied) admin-levels.



Source: BofA Merrill Lynch Global Research

Why look at an implied admin level: mainly for LGFV and non-rated names

In general, admin level matters the most for LGFVs which rely more on government support. For LGFVs, where the admin levels are more obvious, provincial LGFVs will have higher autonomy regarding issuing bond in China domestic bond market after the tightening policy implemented in 2017. The senior management of LGFVs often come from, could move to, government entities, e.g., SASAC or CBIRC. There is usually a stronger sense of admin level at LGFVs' management than SOEs. The transmission between SOEs and government is much less frequent than LGFVs. The admin level is the least important for FIs among the three, in our view. Other than Big 5 banks in vice-principal-city and AMCs in principal-city level, a majority of commercial banks and NBFIs are market driven and are separated from the government administrative system. That said, it is quite often the senior officials in PBoC/CBIRC/CSRC used to work in the Big 5 banks.

How to determine an implied admin-level

The central government has been trying to remove the admin level since 1990s, in order to build up a more competitive market economy. As early as September 1999, CPC Central Committee released the "Decision on Some Major Issues Concerning the Reform and Development of State-Owned Enterprises", which officially removes the admin level of SOEs and their executives. However, the CPC organization system is still centralized, controlling the career pass of the senior management teams of the GREs, an implied admin level seems always in place and determining the policy and financial resources of a GRE.

Unlike the shareholding structure information, the admin level is not a standard disclosure for GRE. A GRE could even deny that it has an official admin level, although a true high-level GRE is often proud and open to the question about its implied admin level. There are several ways we could imply the admin level, and could identify if it is a GRE with government support as well:

1. The career-path of the current Party Chief or previous Party Chief, who is usually the Chairman of the company. If the current party chief comes from a government entity, or previous party chief moves to a government entity, then the admin-level of those entity would be important references. It is generally perceived that the admin-level is one-way in an ascending form. And the senior management evolved in the turnover should be quite clear about if it is a same-level move or a promotion to a higher level.

2. The admin-level of upper level entity who appoints the senior management. The implied admin-level of the GRE should be one or two grades lower than the entity which determines its management. The entity here could be a government entity, or a GRE, with a higher level organization department, (or called human resources department in a GRE).

3. The CPC committee membership. Some senior management in GRE is the Member of Central Committee of CPC, which usually imply the admin-level at Principal Provincial, or Vice Provincial level occasionally. And the Alternate Member of Central Committee of CPC often implies Vice Provincial level, or Principal City level occasionally.

4. Special designations, such as the State-owned Assets Supervision and Administration Commission (SASAC)'s "Backbone SOEs", or China Banking and Insurance Regulatory Commission (CBIRC)'s "National commercial banks", which indicate the Vice Provincial levels.

Checking the admin-level could help identify fake SOEs

If the company cannot be fitted into the admin-level framework, this may imply that when there is repayment risk, because no upper level government agencies/GREs could step in to provide timely financial support. The upper-level supports reflected in the characteristics of GREs are the following. Investors may consider conducting a cross-check on the issuer if they are not sure if the issuer could have government support in the future.

1. The appointment of senior management will be conducted by upper level entities, likely to be the Organization Department and the corresponding party committee;

2. In August 2014, the central government released a reform plan for the payment packages of executives of central SOEs and financial institutions. The total income of senior management is subject to a salary cap, which is usually at around RMB600,000 (about USD90,000) on an annual before-tax basis;

3. Some other restrictions on senior management such as going overseas from China, personal and relative statuses (e.g., nationality, property, etc.) declaration, retirement age, etc.

Double system with CPC's controlling power over the executives of GREs

We have discussed the administrative system with some of the key drivers from CPC system. Essentially, the GREs in China are jointly managed by double-parallel systems: the Communist Party of China (CPC) system and the administrative system. The two systems overlap in terms of senior-ranking officers, with the Party Chief being the Chairman usually. A series of important decisions are subject to the approval of Party Committee in the GREs, or of the upper level entities above the GREs, including: (1) appointment and promotion of executives and middle-level management (usually defined as managers at county level and above); (2) disciplines inspection on salary, retirement, entry to and exit of the country; (3) the internal control, major corporate strategy and investment decisions.

In the framework of CPC's HR management, the hierarchy is reflected in the administrative levels, explicitly or implicitly recorded in the personal file managed by the HR departments in GREs or the government entity. It is important to know that the admin-level for GREs is implicit. In 1999, the Chinese government decided to withdraw the official admin-level of GREs and GREs' senior management. However, with the Organization Department of Central Committee of CPC being the main leader, the HR management of GRE senior managements is highly centralized and integrated into the CPC system. The admin-level is the foundation of the CPC's HR management. That said, most GREs, especially for the highly ranked one in provincial level, have potential admin-level implied by their career-pass of the current Party Chief, the admin-level of upper level Organization Dep't., which appoints the senior management, and the CPC committee membership of the Party Chief. For details for this CPC system, please refer to Appendix 2: CPC system.

To summarise, the CPC system is very important in China just as Richard McGregor in his book *The Party*, explained that a similar department in the US *"would oversee the appointment of the entire US Cabinet, state governors and their deputies, the mayors of major cities, the head of all federal regulatory agencies, the chief executives of GE, Exxon-Mobil, Wal-Mart and about fifty of remaining largest US companies, the justices on the Supreme Court, the editor of the New York Times, and the Wall Street Journal and Washington Post, the bosses of the TV networks, and the cable stations, the presidents of Yale and Harvard and other big universities, and the head of think-tanks like the Brookings Institution and the Heritage Foundation. "*

Differences

In this section, we differentiate the three pockets of GREs – FIs, SOEs and LGFVs – by their (1) function, (2) regulation /supervision, (3) transparency, and (4) investor base.

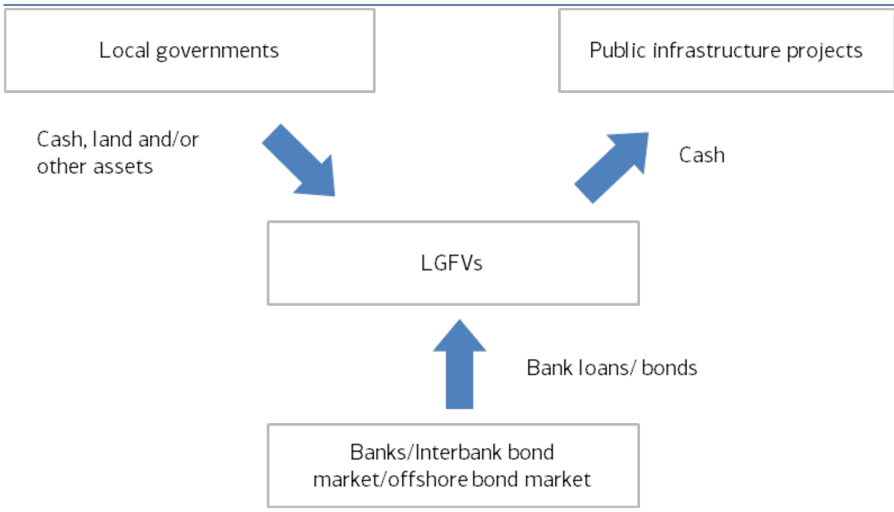
Functions in economy

FIs: Providing a variety of financial services is the general function for financial institutions in any economy, e.g., taking deposits and providing credit to corporate sectors. Its general importance to the economy and social salability is very high. While, as China's GREs, FIs could (1) provide the credit growth based on the central government's guidance on loan quotas on annual basis; (2) make contribution in terms of dividend payout to the government as a shareholder; and (3) providing funding to prioritized sectors, it could be not only other GREs, e.g., SOEs/LGFVs but also POEs like the policy mandates announced in 2H18. Having explained those policy functions, most listed FIs are very profit driven to maximize the interests of the shareholders.

SOEs carry more policy functions than POEs. This is especially true for the 97 SASAC-administered central SOEs. Among the 97, the top 49 are commonly known as the backbone SOEs. Their functions for the government are very important in terms of carrying out certain policy mandates, such as energy/food security, controlling inflation and push forward national strategies in key industries. Meanwhile, given the Central SOEs' mega size of operations, they also contribute meaningfully in FAI, employment and fiscal revenue via tax/dividend. While other than Central SOEs in *Strategic industries*, the local SOEs are usually in competitive sectors like manufacturing or commodity related sector, their functions could be replaced by POEs. The government support is usually based on the long-term profitability of a SOE. If the SOE would be only viable on government financial aids, most likely the support could be very weak amid repeated repayment risks.

LGFVs have a very important policy function as the funding arms of local governments and also the working units conducting FAI. Having been rooted into the unbalanced fiscal system since 1990s, the importance of LGFVs is mostly due to the restrictions of government direct borrowing from banks and capital market. The central government collects a considerable portion of fiscal revenue from local governments, but guides them to have a high FAI to support the economy and employment through LGFVs. Relative to local SOEs, their operations are unlikely to be in the competitive sectors. For more details, please see *LGFVs: Cheaper funding expected in 2019*.

Exhibit 2: Business model of a LGFV



Source: BofA Merrill Lynch Global Research, Joyce Liang: China LGFV primer 15 August 2016.

Regulation and supervision

SOEs/LGFVs: a dual role of SASAC and its potential issues

Some of the following charts/interpretations are from Asia Credit strategist Joyce Liang's primer on Chinese SOE bonds – A primer 10 September 2014, Fitch report: China SOEs by Ying Wang, Kalai Pillay and Andrew Steel on 9 June'14, Moody's report: Banks- China, Banking System Profile by Helen ZHANG, 31 OTC.'18.

State-owned Assets Supervision and Administration Commission (SASAC) is the main regulator and supervisor. SASAC has a broad mandate, which includes drafting laws and regulations for central SOEs, managing and restructuring state assets, appointing and evaluating executives of SOEs under its supervision, and auditing state assets. SASAC also has the right to collect dividends from SOEs on behalf of the government. Apparently, the dual roles of shareholder and regulatory introduce two potential issues: conflict of interest and agency. The state capital investment (SCI) model was rolled out in 2014 to address the issues. SASAC selected some SOEs to become SCI companies, similar to Temasek Holdings in Singapore to play the shareholder role, while SASAC may purely act like a regulator in the future. Overall, we do not expect major impact from such a reform in the short term, as most USD issuers are like holding company with 100% owned by SASAC. For a detailed discussion, please refer to *Ownership of Central SOEs and SCI model.*

FI regulators: Huijin model

The regulatory entity for State-Owned Enterprises / Local Government Funded Vehicles, is the State-owned Assets Supervision and Administration Commission with a dual role. FI regulatory entities are mainly the People's Bank of China, the China Banking and Insurance Regulatory Commission and the China Securities Regulatory Commission, separated from the shareholders of the China Investment Corporation or the Ministry of Finance. This is officially called the Huijin model. We think the Huijin model is more advanced with a separation of shareholding and supervision, thus becomes the blueprint of State-Owned Enterprise holding structure reform. For more details, please see the following chart and *Huijin Model: the holding structuring after 2010*

Exhibit 3: Key highlight of Huijin model - Four principles

Source: BofA Merrill Lynch Global Research, CIC annual report 2017.

Exhibit 4: Key highlight of Huijin model - Three key platforms

Platform for the reform of and capital injection into state-owned financial institutions

- Since 2003, Central Huijin has injected capital into the five commercial banks, namely, ICBC, ABC, BOC, CCB and China Everbright Bank. It also initiated a series of market-oriented reforms, such as facilitating financial restructuring, revamping the shareholding system, bringing in strategic investors and supporting their public offering. Since 2005, it has helped nine securities companies out of difficulties through market-oriented approaches, and injected capital into the China Reinsurance (Group) Corporation and New China Life Insurance Co., Ltd. Since 2007, it has also injected capital into China Development Bank and China Export & Import Credit Insurance Corporation actively looking into governance models suitable for development and policy financial institutions.

Platform for the investment and operation of state-owned financial capital

- Central Huijin has facilitated the public offerings of 11 holding companies, including ICBC, ABC, BOC, CCB, China Everbright Bank, China Reinsurance (Group) Corporation, New China Life Insurance Co., Ltd, China Galaxy Securities, Shenwan Hongyuan Securities, China International Capital Corporation, and China Securities. It also assisted in the merger of Shenyin & Wanguo Securities Co., Ltd and Hongyuan Securities, and the merger of China International Capital Corporation and China Investment Securities. It has exited from some non-systemically-important financial institutions through share swaps and listing transfers. And it has taken steady steps to trade, in the secondary market, the A shares of its holding companies and exchange-traded funds.

Platform for the management of state-owned financial equity

- Central Huijin manages its equity holdings through market-oriented and professional methods and exercises its shareholder rights granted by the law to participate in the decision-making of its holding companies without interfering in their day-to-day operations. As the representative of the investor in state-owned capital, it dispatches directors to its holding companies to the extent of its capital contribution, closely tracks the operations and risks of the companies, organizes periodic assessments, and issues “management recommendation letters” and “risk warning letters”.

Source: BofA Merrill Lynch Global Research, CIC annual report 2017

In terms of regulation, China’s financial sector has been following the separated operations/ regulations rule since 2003 when CBRC, China Securities Regulatory Commission (CSRC) and CIRC were founded and took over most of the regulation functions from the PBoC, they managed banks, security firms, and insurers separately. In April’18, the CBRC and CIRC were merged to CBIRC.

CBIRC is the direct regulator for commercial banks, asset management companies, financial leasing companies attached to banks, and trust companies. CBIRC is also responsible for the Basel III implementations by making the specific regulatory lines for capitalization, asset quality, liquidity, risk weights for each categories, etc. For example, Basel III was announced globally around 2011 and, by 2013, commercial banks under CBRC’s supervision started reporting capitalization based on Basel III terms of CET1 instead of Core Tier 1. The banking-specific rules are implemented, in parallel with the general accounting rules in China managed by the MoF.

CSRC is the regulator for security companies and, more importantly, CSRC is the centralized comprehensive regulator over China’s securities system. IPO, preferred share issuance, China domestic bond market are all under CSRC’s supervision.

PBoC mainly manages the monetary policies, but occasionally, PBoC could often lead CBIRC and CSRC by jointly issuing important rules/regulations for the financial sector, despite being at same admin-level.

Investor bases

Based on the new issue subscription statistics in Bloomberg, we analyse the AT1, tier-2, senior bonds, AMCs, NBFIs, 1st tier SOE, 2nd tier SOEs, BBB SOEs and LGFVs. Our statistics are based on the issuance in the past five years, as not every sub-category has enough new issues in recent years. For example, AT1 was mostly issued in 2014 and 2015. And there is no banks senior bonds issued from GREs since end-2017. Our main conclusion includes the following.

1. **Home bias:** China GREs' investor base is mainly in Asia with 86% of the allocation of new issue in the region. Europe and the US contribute 9% and 5%, respectively. Banks AT1, as well as LGFVs, are the most local-demand-driven asset class, with 94-99% of investors are in Asia.

2. **Foreign participation:** In contrast to home bias, 1st tier SOEs have the highest international investor participation of 29% from the US and 16% from Europe. Bank tier-2 has a similar feature with more 20% investors from the US and Europe.

3. **Key investor type:** In Asia, asset managers and commercial banks are two important types of investors, who in total subscribed 75% of the new issue. Corporate's treasury book and private bank have similar contribution at about 5%. Pension, insurer and sovereign wealthy fund is 14%.

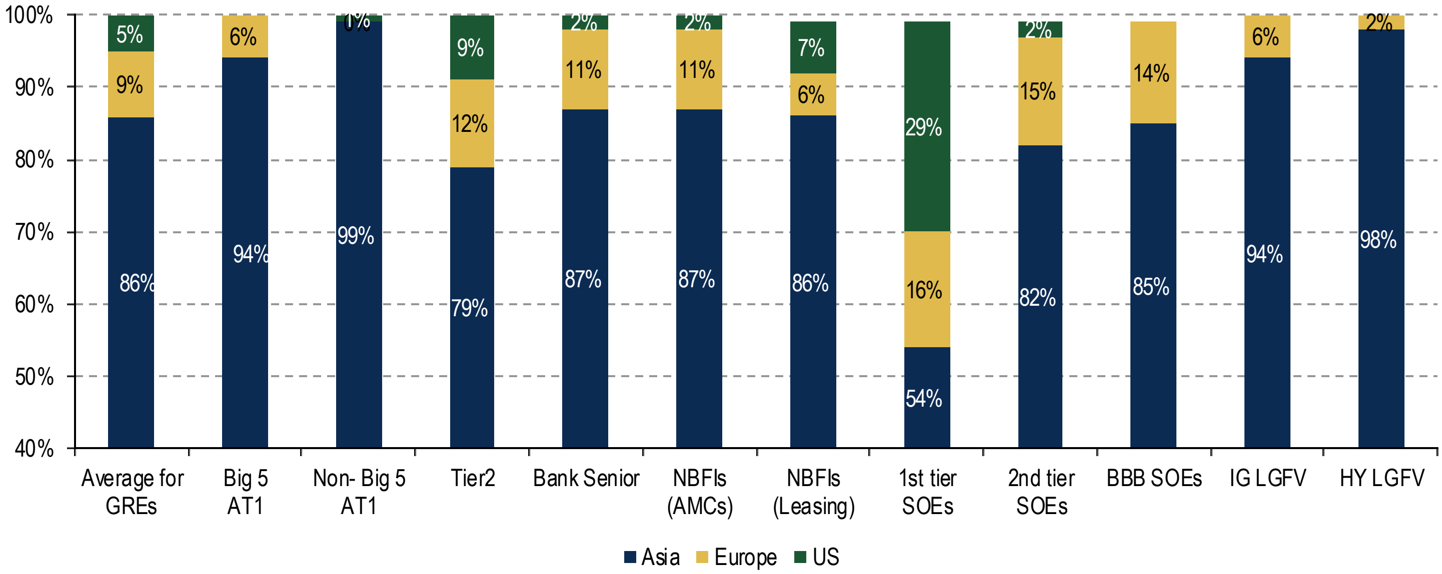
4. **Cross-subscription:** There is a strong cross-subscription between commercial banks to buy each other's senior bonds, with 69% of the banks seniors allocated to other banks. Interestingly, some mega banks, e.g., Big 5, could play triple roles in dollar bond market: issuers, investors and even as bond underwriter. Similarly, corporate is also active to buy non-big banks' high yielding AT1. Some of the corporate issued dollar bonds are bought by banks as well. A lot of Chinese asset managers' ultimate asset owners are either banks or corporate.

5. **non-banking financial institutions (NBFIs)** are primarily supported by Asia asset managers and commercial banks, especially for leasing companies, which is similar to BBB SOEs as well.

We think the capital account control in China plays a key role behind this strong demand. While the demand level is varied across categories, largely depending on the risk appetite, as well as the difficulties of the credit research coverage. For instance, commercial banks could largely trade other bank's senior as low credit risk, as they are essentially trading counterparties in China onshore bond market. And onshore credit opinions from risk department of the banks and asset managers help them to have higher risk appetite in LGFVs and AT1s.

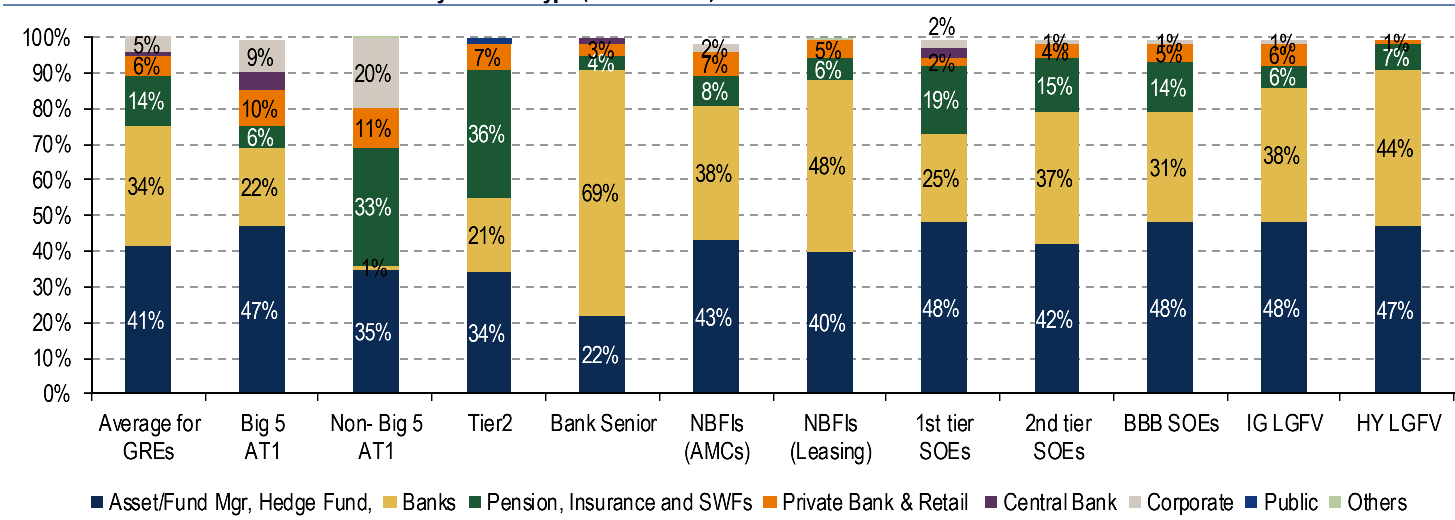
For the analysis on the local demand, as well as foreign demand, please see *Demand: investor base for GREs* in next section.

Chart 12: Investor base of GRE new issuance by region (2014 to date)



Source: BofA Merrill Lynch Global Research, as of April'19

Chart 13: Investor base of GRE new issuance by investor type (2014 to date)



Source: BofA Merrill Lynch Global Research, as of April'19

Transparency-disclosure & reporting

FIs are generally transparent with a majority of FIs listed in China A-share or H-share. The implementation of Basel III especially help the Big 5's detailed financial disclosure even for the shadow banking part in their audited annual financial reports, thanks to four of Big 5 banks' global systemically important financial institution (G-SIFI) status. Meanwhile, the shadow banking activities on the other hand weakened the visibilities of capitalization and asset quality, mostly for non-Big5 banks, with substantial holdings of interbank assets and financial investments. Sometimes, the loan is less than 40% of a commercial banks' total asset.

LGFVs are the lowest ranked among three segments in terms of and transparency. Most of the LGFVs are not listed but are 100% owned by the local governments. Given the funding channels heavily are reliant on bank loans and shadow banking activities, their capital market experience is generally low. The auditing firms for LGFVs are seldom the international auditors, and the credit metrics could be easily changed due to frequent asset transfers initiated by local governments.

SOE transparency can vary significantly. The listed SOEs in A-shares and H-shares are subject to restrictive regulations and supervisions, while the unlisted SOEs unities are not very transparent. That said, even for the holdco vs. opco in the same group, their transparency could very different. Interestingly, the holding company 100% owned by the government is usually not very transparent, but the government support was deemed to be strong. A lot of greenfield investments are conducted at the holdco level, which is essentially the purpose of issuing USD bonds. While the operating company with listed status could be very transparent, it may trade wider than the holding company as an opco is not included in the category of quasi-sovereign.

Supply and demand dynamics

Key drivers for the **supply** of USD bond by GREs are (1) USD funding needs for operation and overseas expansion, (2) funding cost differential between onshore and offshore issuance; (3) ability to issue for longer duration in the offshore market, (4) for FIs, the Basel III-related-capital needs, and the investment as well as diversification needs. Despite commercial considerations, the ability for GREs to issue offshore could however be limited by government restrictions, generally imposed through the NDRC quota.

General USD funding needs for operation and M&A

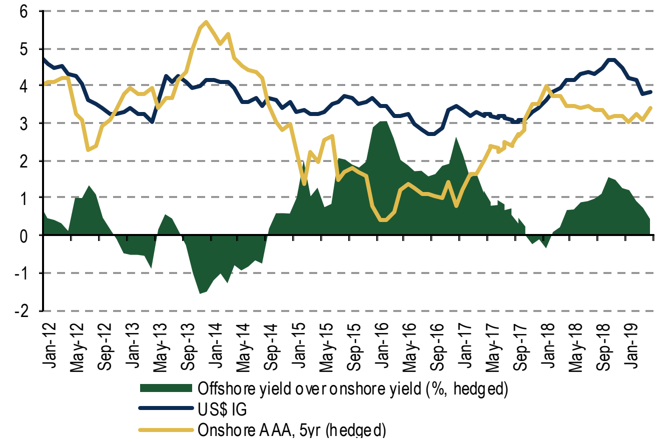
Similar to any bond issuers in the world, China GREs dollar bond issuance is primarily driven by their USD funding needs for daily operations. Many Central SOEs have sizable overseas projects and facilities which need USD funding. Some of the funding needs are met by bank loans which are likely to be amortized and relatively short term. So the SOEs, or the bank which wants to provide long-term project funding, will issue dollar bonds. Meanwhile, the policy initiatives from the central government, such as RMB internationalization and one-belt-one-road policies, etc., in 2013 have been the main drivers for GREs' dollar bond supply in the international bond market. Since then, the Chinese GREs had more overseas expansion plans and FX funding needs.

Cost driver: China onshore vs offshore

To seek cheaper funding has been an important strategy for any company in the world. What is special in China, is that there is the onshore-offshore interaction, where China onshore market is substantially larger than the offshore market. The outstanding size of GREs bonds in the offshore USD market is about USD275bn at end April'19, while that in onshore market it is about RMB26,000bn (USD3,900bn). So it is fair to say that GREs' dollar bond supply could be a function of China onshore bond market in the short term.

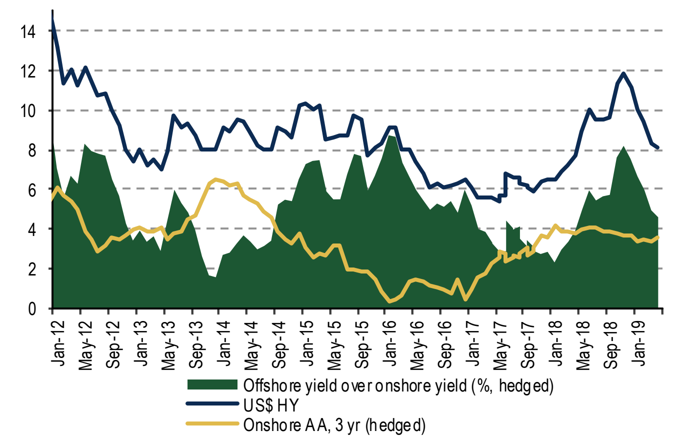
We compare the onshore offshore funding cost in the following charts: IG issuer in the offshore market is roughly similar to the AAA issuer in the China onshore market. The China onshore funding cost on a currency hedged basis is usually cheaper than that in the international bond market. The funding cost dynamics has been one of the main drivers of the USD bond issuance. In terms of HY sector, as the Chinese onshore market usually has smaller credit spread differentiation, the trend is even more obvious with onshore being cheaper. However, a lot of HY sector international financing activities are subject to the NDRC quota.

Chart 14: China offshore IG: lower cost (%, hedged) than onshore AAA



Source: BofA Merrill Lynch Global Research, Wind.

Chart 15: Offshore HY: even more so vs. Onshore AA. (hedged, in %)



Source: BofA Merrill Lynch Global Research, Wind.

LGFVs: high funding cost in onshore market

The cost driver is particularly fit for LGFVs after 2016, as the central government started to tighten the policies over the funding to local government with LGFVs as a legacy channel. LGFVs heavily relied more on high-cost funding onshore, e.g., shadow banking activities. Some HY LGFV funding costs could be as high as 10% in China onshore market. In March 2018, Chinese commercial banks were even largely prohibited from providing funding to local governments via LGFVs from the banks' off-balance sheet, via Notice No. 23 (2018) by the MoF. This explains why LGFVs essentially have low USD funding needs for their China domestic-driven operations, but still issued more dollar bonds than SOEs in 2018. However, from a forward-looking perspective, the supply of LGFVs is more uncertain than others due to the future development of the onshore funding.

Table 4: Tightening policies on local governments and LGFVs funding in 1Q18

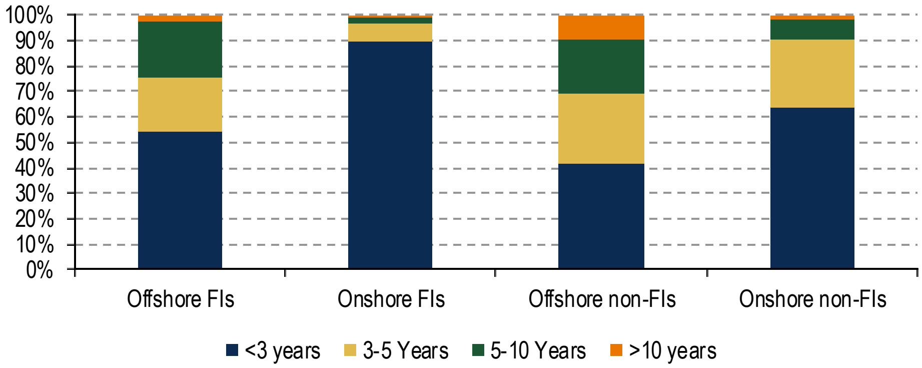
Policy purpose	Main content	Notice name
Close the back-door	In March'18, the commercial banks were prohibited from providing funding to LGFV via shadow-banking activities any more.	No. 23 Notice, Regulating the Investment and Financing Behaviors of Financial Enterprises for Local Governments and State-owned Enterprises
Weaken the linkage between LG and LGFV	Any corporates are strictly prohibited from providing false statements or misleading publicity relevant to the local government credit.	(No. 194 Notice, Further Strengthening the Corporate Bonds' Capacity of Serving the Real Economy and Strictly Preventing Local Debt Risks)
Open the front door initially:	In March'18, the MoF allowed LGFV to issue local government special bond, mainly based on existing projects.	No. 34 Notice of Properly Performing 2018 Local Government Debt Management Work

Source: BofA Merrill Lynch Global Research, MoF, CBIRC;

Duration driver: China onshore bond market's duration is substantially shorter

Duration in the China onshore bond market is shorter than that in the offshore market. As shown in the following chart, in FIs sector, close to 90% of the financial bonds have a due date within 3 years, while that is only 54% for offshore FIs bonds in the GRE space. In terms of non-FIs, 90% of onshore bonds have due date less than 5 years, while that is 42% in the offshore dollar bond market. So many SOEs and FIs issue dollar bonds for longer dated funding needs.

Chart 16: Duration comparison of China onshore offshore funding



Source: BofA Merrill Lynch Global Research, Wind.

Restrictions on USD bond issuance, e.g., NDRC quota

In view of its capital account controls, to get financing overseas in China would need more government support. This is particularly true for SOEs with substantial overseas operations or M&A plan. Compared with private side, e.g., real estate developers, it is easier for SOEs to get NDRC quota. The regulation regarding issuing international debt were relaxed since 2013, and the NDRC approval process was relaxed meaningfully after GREs' offshore issuance and refinancing needs increased. In early 2017, the NDRC launched a new round of reform on external debt management. A pilot programme within the reform package allowed 21 companies to issue international bonds at their own discretion. Among the 21, only two are not GREs, which are HUAWEI and HNA Group. We have one LGFV: Sichuan Development Holding Co., five SOEs such as CITIC Group and Sinopec, etc, and others are all FIs.

However, in 2018, the government seemed to start rethinking given reckless overseas expansion, and we find the supply has decreased substantially, especially after the National Development and Reform Commission set up a deleveraging target at 2ppt by 2020. In the first five months of 2019, even the market rallied, with yield coming down, the SOEs dollar supply is very less.

FIs: Basel III, liquidity diversification and investment needs

Basel III capital instruments

When Basel III instruments have not been widely accepted in China onshore market, commercial banks have to issue billion dollars of banks' capital in international market to replenish capital. The onshore preferred share policy did not work well due to its equity nature and China Securities Regulatory Commission approval. However, things may change in 2019 onwards after the PBoC changed the name of preferred share into perpetual bonds. The further supply from banks should be much lower than before. For more on the perpetual bonds, please see *Government support: cross-subscription of bank capital*.

NBFIs: leasing sector has operating needs, AMCs more about investment

NBFIs generally have higher funding needs than banks as they do not take deposits. For financial leasing companies, they need USD funding to purchase aircraft overseas. Asset management companies mainly focus on the domestic market for non-performing asset management, still want to search higher yield by fixed-income investments overseas, e.g., to buy USD AT1 or property' HY bonds. However, after Huarong ex-chairman's corruption case, the business model should change in the future.

Senior bonds from commercial banks:

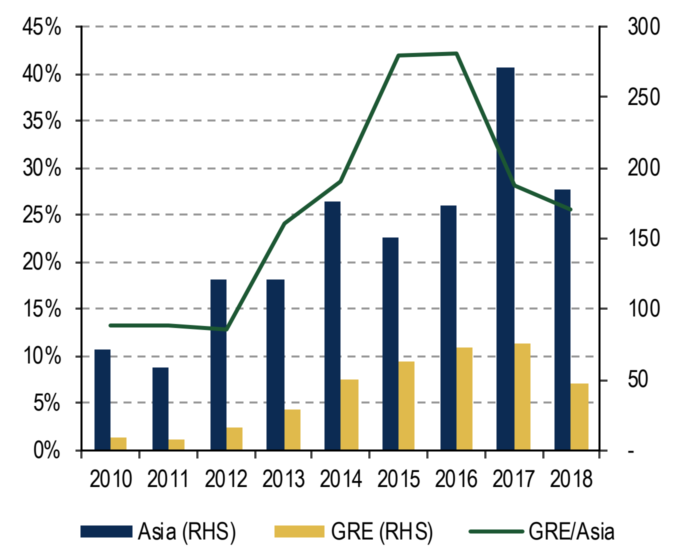
Some commercial banks need certain diversifications in terms of currency or tenor. So every year, the Big 5 issue some senior bonds with a small size relative to their total asset at trillions of USD.

Statistics of GRE new issues: 40% of Asia in 2015/16, 26% in 2018

As we have studied the main drivers for the supply, it would be helpful to look at the past dollar supply history. Starting with only USD10bn in 2010, China GRE's issuance increased to USD76bn in 2018 with CAGR at 33.6%. The market volatility in 2018 dampened risk appetite amongst Chinese investors, thus GREs' new issuance dropped to USD50bn, 26% of new issues in Asia.

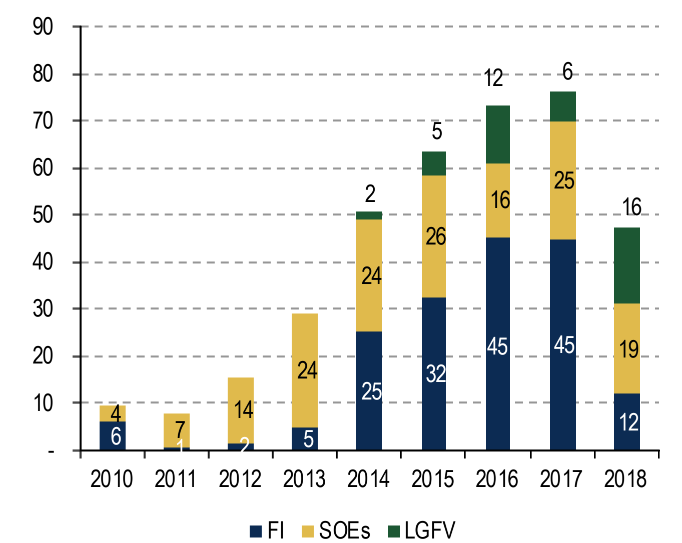
Within GREs, SOEs have been leading the new issues since 2011 and increased fast from 2011 to 2014 on policy initiates. While 2014 is an important year for FIs, which pushed the issues to USD51bn from USD29bn in 2013. The Big 5 banks issued AT1 after the Basel III framework was confirmed in 2013, and Chinese asset management companies started to issue massively in 2014. LGFVs issuance started to be substantial in 2016 and 2018, given the funding cost difference. LGFVs' issuance is more than FIs and comparable to SOEs already with the main driver from onshore market.

Chart 17: New issue of GRE in Asia credit (in bn USD)



Source: BofA Merrill Lynch Global Research;

Chart 18: New issue of GREs by FIs, SOEs and LGFVs



Source: BofA Merrill Lynch Global Research;

Demand: investor base for GREs

USD Bonds issued by different types of GREs has different investors base. To understand the **demand** driver, it will therefore be important to know the make up of such investor base (see page 19 above) to understand motivation to invest in USD Bonds. We see capital control, preservation against RMB depreciation and capitalising the onshore/ offshore risk premium as the main drivers for Chinese investors buying GREs USD bonds. On the contrary, we believe the motivation for foreign investors demand would be driven by (1) using the GREs as a proxy for China (2) the relative ease of understanding the credits, (3) size and track record of issuance.

More about local demand from commercial banks and corporate

We highlighted the statistics of the subscriptions of new issues in the investor base part. The key characteristics of the demand are home bias and cross-subscription, which are majorly driven by commercial banks, and large Chinese corporate, which are the ultimate asset holders which hire the asset managers for dollar bond investment. We highlight three main reasons for the special technical backdrop for these two categories.

1. **Capital account control** in China made the onshore-offshore transfer subject to regulatory approvals. That means once the GREs get USD funding in the offshore market, most likely they will use the funding in the offshore market rather than transferring the funding back to the mainland, because they have to ask for approval if they want to move the funding to the offshore again once they transfer it back. So even there is no operating needs in the offshore, the issuers will still likely to keep a sizable dollar liquidity and invest them into cash bond from GREs. Such investment usually requires low credit research coverage cost, if the investors are banks which could leverage their onshore risk departments' credit opinions;

2. **To preserve asset value by USD investment due to RMB deprecation.** The game changing event in the USD dollar bond investment area happened on 11 August 2015: FX reform for the RMB to join the International Monetary Fund (IMF) Special Drawing Rights (SDR). RMB devaluation started since then and the USD deposit in China banking system increased substantially, thus the USD bond investment needs picked up substantially as well.

3. **Credit risk premium higher in offshore market vs onshore**. Given the long history of rigid payment (meaning very low default risk) in the China onshore market, there is a strong tendency to be indifferent towards credit risk amongst Chinese investors. So it is likely that they find offshore market attractive with higher credit risk premium offered. For commercial banks, the senior bonds from other banks are almost risk free, so are the 1st tier SOEs, e.g., oil majors. So the spread over treasury is compelling. For the treasury books of SOEs, the banks paper are almost risk free too, as they take loans from the banks, so even the AT1 is not that risky.

4. While the demand level for different GREs is varied across categories, largely depending on the risk appetite, as well as the difficulties of the credit research coverage. For instance, commercial banks could largely trade other bank's seniors as low credit risk as they are essentially trading counterparties in China onshore bond market. And onshore credit opinions from risk department of the banks and asset managers help them to have higher risk appetite in LGFVs and AT1s.

Foreign demand in GREs space: oil and tier-2

For oil majors, they all have high-single-A rating and solid fundamentals. It is easy to find comparable entities for oil major names in Asia with similar quasi-sovereign status. Actually, thanks to the large standing size, oil names could be a benchmark for a relative value framework for SOEs, even the whole GREs. We also usually compare tier-1 SOEs with China tech names with similar A rating and a more international investor base.

In the FIs space, 2nd tier capital is the most international comparable asset class in FIs. We could generally compare Big 5 tier-2 with global and Asia peers with similar rating and structural risk. Meanwhile, Big 5 banks generally do not purchase USD capital instruments issued from peers given the higher risk weights.

Rating methodology

Top-down vs Bottom-up

Bottom up

The bottom-up is a standard approach for the three rating agencies. It starts with a standalone rating usually based on fundamentals. S&P and Moody's call it standalone credit profile (SACP) and baseline credit rating (BCA), respectively. Fitch calls it standalone credit profile (SCP) for corporate, or viability ratings (VR) for financial institutions. The rating agencies then raised (or constrained) according to the likelihood of support from the government. In the context of China GREs, there is usually a rating uplift as China's sovereign rating is higher than most GREs' issuer standalone ratings.

Rating uplifts in bottom-up approach

There are some uncertainties regarding the rating uplift, e.g., a sovereign rating downgrade, rating methodology changes and weakened government support reflecting in certain measure. A high notching-up at 6-8 grades often happen for some GREs with weak fundamentals in the LGFVs space. In May 2017 and September 2017, Moody's and S&P downgraded China sovereign rating to A1/A+ from Aa3/AA-, most of GREs maintained their credit rating unchanged except the quasi sovereigns with double-A ratings. That said, the impact came less impactful than expected.

Rating uplifts for different GREs

As would be expected, the degree of uplift applied and ratings adjustments across segments were generally quite varied across agencies and issuers, highlighting the overall subjectivity of the assessments. That said, there were some broad trends in their ratings treatment that were consistent across agencies. In general, property SOEs, bank capital either received very minimal or no uplift, Vice Provincial level SOEs, LGFVs on average received greater uplifts. Sub-provincial SOEs and LGFVs got less rating uplifts. For SOEs, the greatest uplifts were companies in 'pillar industries', but with very weak standalone profiles. Issuers involved in the most strategic industries such as oil & gas did not necessarily receive the most uplift, though this can be explained by the sovereign rating acting as a ceiling given their already very strong standalone profiles. Below, we outline the approaches taken by each rating agency to adjust for SOE linkage or influence.

Top-down approach

The top-down approach does not provide much information about the issuer itself, but more focus is on the support provider, e.g., the government, who owns the issuers. So the starting point is usually the sovereign ratings. The rating uplift concept is not applicable in the top-down approach because there is either no standalone rating, or the standalone rating is not a reference for financial ratings. One of the key special features for the top-down approach on China GREs is that, as the rating agencies argued, the top level information is often not disclosed in the rating report. So comparing with the normal corporate issuers, investors may not get sufficient information on the issuer from the rating report. For instance, in LGFV sector, since the local governments do not ask any rating agencies for credit rating service, the rating agencies may treat the rating information of the governments as private information. That is one of the reasons why rating agencies do not publicly disclose a detailed quantitative research on the financial soundness of China's local governments. Thus some top-down approaches seem to be seriously lacking key information.

How to decide which approach to use?

Among the three agencies, S&P does not have a top-down approach in the GREs rating space. Moody's has both approaches, but only use bottom-up for China GREs, with one exception in LGFVs space. Moody's has withdrawn the rating for GREs. For China's GREs, Fitch usually uses top-down approach for LGFVs and a majority of FIs. It makes adjustments in several different ways, depending on the type of company and relationship to the government. Generally, a top-down approach is applied where the government linkage is very strong, a bottom-up approach is applied where the support level is more moderate, and a standalone methodology where the linkage is deemed weaker (i.e., property companies). That means, the difference between standalone and issuer rating is not the rating uplift in Fitch's approach and, more importantly, the standalone rating downgrade of the issuer is not necessarily to trigger a downgrade of its bond if the bond rating is based on the top-down approach.

Table 5: Rating methodology of three rating agencies

	Moody's	S&P	Fitch
FIs	Bottom up	Bottom up	Mostly top-down for Big national banks
SOEs	Bottom up	Bottom up	Central SOEs mostly top-down
LGFVs	Bottom up with one exception*	Bottom up	Top-down

Source: BofA Merrill Lynch Global Research;

* The exception is HNYUZI, which is a LGFV in HENAN province. Moody's top-down approach for government related institutions (GRI) was formally mentioned in its Government-Related Issuers published in OCT.'14, and before that Moody's had a similar approach called Credit Substitution.

Rating adjustments based on structures/ subordination

In the case of S&P and Moody's, there is often a final step to arrive at the ultimate bond level rating. This involves notching due to the structure of the deal, which if applied, usually includes a downward adjustment of 1 or 2 notches. Often this is either due to structural subordination (in the case of holdco issuers) or a weaker standalone profile or credit enhancement (in the case of subsidiary issuers), or Basel III framework for bank capital instruments, which is in line with the international standard.

More complicated than the SOE/LGFVs, the senior bonds of FIs generally follow the top-down approach, which reflects a regional characteristic. However, the capital bonds are rated more in line with international standard with little chance to get a rating uplift based on supports from the government. For instance, additional tier-1 capital from Big 5 banks are usually 3-4 notches lower than the standalone rating of the bank, and even 6-7 notches lower than the rating of the senior bond of the bank.

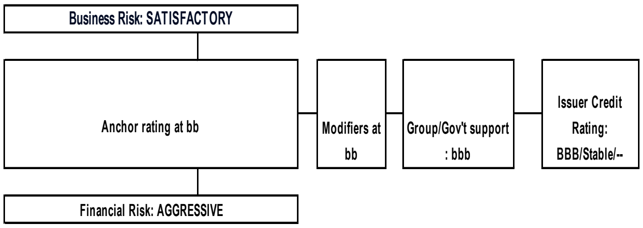
S&P

From anchor rating to SACP

S&P's rating assessment of Chinese SOEs/LGFVs begins with its anchor rating, which takes into account both business risk and financial risk. Then S&P will adjust this anchor rating by certain modifiers, e.g., financial policy, liquidity, etc., to get a standalone credit profile (SACP). Under the single approach, S&P does not particularly distinguish LGFVs vs. local SOEs.

For FIs, the anchor rating is generally based on the country and key features of the banking industry in its home market. Modifiers for FIs are different as well which include business position, capital and earnings, funding and liquidity. After the modifiers, a SACP will be derived. In terms of the capital bonds ratings in FIs, S&P rated them without uplifts of support assumptions, but a deduction. The starting point of the notching would be a SACP with downside more likely. For example, the Big 5 Chinese banks' SACP is bbb+, the Basel III tier-2 is BBB+, the same as SACP. While their AT1 is only BB to BB+, the deduction of 3-4 notches is due to the Basel III bail-in features.

Exhibit 5: S&P credit rating chart on CNBG



Source: S&P

Exhibit 6: S&P rating chart on Bank of China

SACP	bbb+	+	Support	+2	+	Additional Factors	0

Anchor		bbb-
Business Position	Strong	+1
Capital and Earnings	Adequate	0
Risk Position	Adequate	0
Funding	Above Averag	
Liquidity	Strong	+1

ALAC Support	0
GRE Support	+2
Group Support	0
Sovereign Support	0

Issuer Credit Rating
A/Stable/A-1

Source: S&P

From SACP to ICR: rating uplift

An uplift is then applied to reflect expectations of government support to arrive at the Issuer Credit Rating (ICR). This assessment takes into account prevalence of existing, ongoing government support, as well as the likelihood of additional extraordinary government support, which is based on the company's role and link to the government.

The agency views extraordinary government intervention as either "discrete" or "temporary" (as opposed to ongoing), entity-specific (as opposed to system-wide), and often related to financial stress at the SOE level. S&P views the potential for extraordinary government intervention as coming on top of "ongoing" interactions.

- **Extraordinary intervention:** Usually occurs in periods of stress and takes the form of liquidity injections, loans from the government or through government-owned banks, recapitalizations, or arrangement of a solvency rescue package directly from the government or through other market participants. If the SOE accounts for a substantial share of government revenues, "support" may mean the government takes less and leaves more to the SOE for its own investment and debt-service needs.

- **Ongoing:** Periodic capital injections and subsidies to support SOEs to implement social and public policy objectives (i.e., infrastructure projects undertaken by SOEs in emerging economies that could support China's energy consumption; or industrial policy favoring champions through tax incentives, low-cost funding, and speedy approval for licenses, land-use rights and other business and funding procedures).

The following two parameters determine S&P's classification of the likelihood of extraordinary government support (low, moderate, moderately high, high, very high, extremely high, almost certain).

(1) **Role:** Importance of the SOE role to the government. Determined by assessing the severity of the effect that a default of the SOE would have on the government or local economy. An SOE may be crucial to the government either because it implements a key national policy, provides an important public service, or because it affects the proper functioning of a critical economic sector. Scale: critical, very important, important, limited importance.

(2) **Linkage:** Link between the SOE and the government. Judged by looking at the degree to which the government drives the SOE strategy and its operations, and by the level of government supervision. S&P considers matters like the percentage of government ownership of the SOE and reputational risk to the government should the SOE default. Scale: integral, very strong, strong, limited.

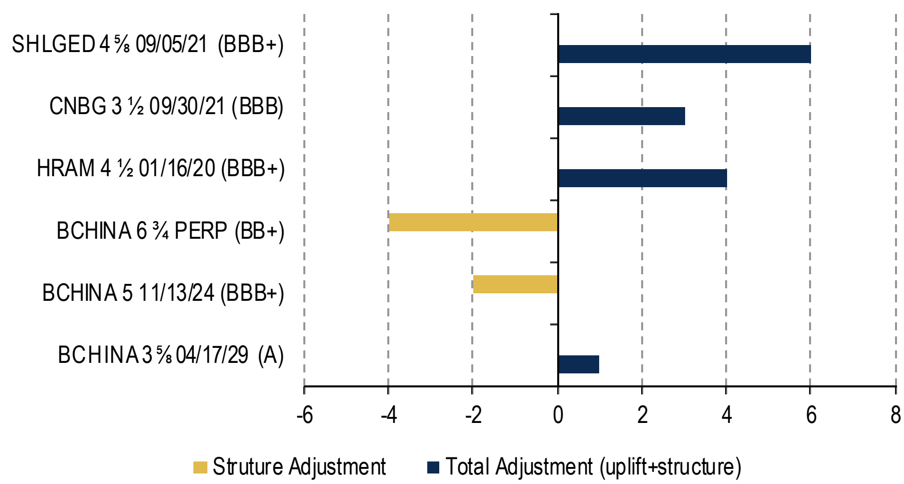
In practice, uplifts can vary from 0 to 8 notches, with bank capital generally receiving zero uplift while the LGFV often receiving the highest.

Exhibit 7: The likelihood of Extraordinary Government Support based S&P rating methodology

Role-Link Matrix For Assessing The Likelihood Of Extraordinary Government Support					
Likelihood of Extraordinary Government Support		Importance of the GRE's Role to the Government			
		CRITICAL	VERY IMPORTANT	IMPORTANT	LIMITED IMPORTANCE
Link between the GRE and the Government	INTEGRAL	Almost certain	Extremely high	High	Moderately high
	VERY STRONG	Extremely high	Very high	High	Moderately high
	STRONG	High	High	Moderately high	Moderately
	LIMITED	Moderately high	Moderately high	Moderately	Low

Source: S&P

Chart 19: S&P's credit rating adjustments for LGFVs, SOEs, and bank senior, bank tier-2 and AT1



Source: BofA Merrill Lynch Global Research, S&P;

Moody's

Baseline Credit Assessment (BCA) as the starting point of notching

Since there is only one issuer in China, the GREs space has no BCA in Moody's methodology, and none of the dollar bonds issued from China GREs is rated with top-down approach by Moody's, and we will not introduce Moody's top-down approach (for details, please see Moody's Government-Related Issuers rating methodology).

Moody's uses its government-related issuers (GRI) methodology in determining ratings, which overlays a firm's underlying credit strength baseline credit rating (BCA) with the likely level of extraordinary support from the government in times of stress. In practice, Moody's uses joint default analysis (JDA) framework, which includes a scorecard indicating the credit profile of the issuers.

In terms of FIs in the Chinese GREs space, Moody's does not use the top-down approach as well but has separate rating methodologies for banks and non-bank institutions, e.g., insurance company. Despite the different aspects considered, the key rating components are still BCA, uplift based on the expectations of support from China government, the issuer rating (long-term deposits), and finally the bond rating varied by the ranking of the instruments, e.g., senior, tier-2, AT1. For example, BCHINA's BCA is baa1, its senior bond has 3-notch uplift based on the support at A1, which is the same as sovereign rating, while tier-2 is baa2, one notch lower than BCA; and AT1 is Ba1, 3-notch lower. Sometimes, Moody's will adjust the BCA by Affiliate Support notching for some smaller issuers owned by big banks in China, which will get the Adjusted BCA.

Uplifts: based on operational sector

Varying levels of rating uplift is determined by varying degrees of interdependence between GRIs and the government, as well as differing amounts and the likelihood of support.

Moody's groups SOEs/LGFVs into two categories.

1. The issuers focused on public utilities or infrastructure, and exploit key energy resources, or operate in strategic areas, such as national defense and aerospace

2. The issuers in competitive industries, such as steel, automobiles, chemicals, construction and engineering, commercial enterprises, and property development.

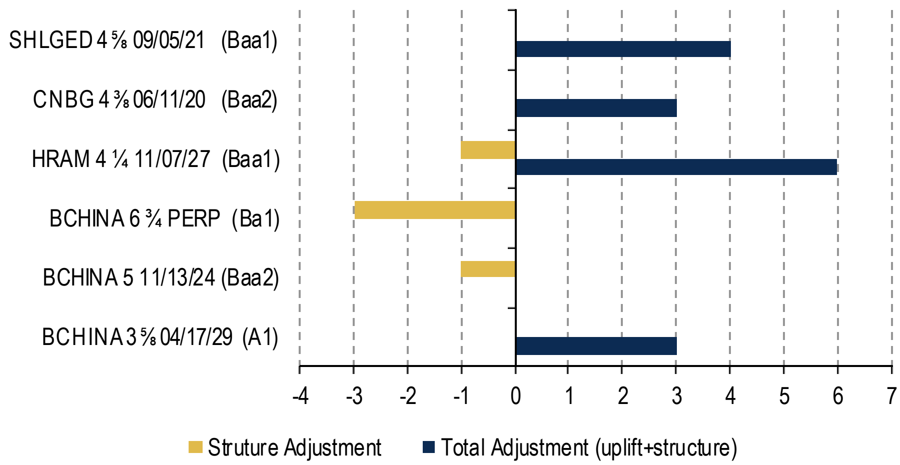
Category (1) is deemed more strategically important, and entitled to higher levels of government support.

Corporates in competitive industries can still have a strong degree of government support because of either important policy mandates or leading positions in a government-identified "pillar industry". For example, China Metallurgical has a dominant position in metallurgical projects and mandates for developing overseas mining resources and building social welfare housing. Baosteel is another example due to its status as a flagship company leading China's steel industry. Both get two-notch ratings uplifts.

No rating uplift is applied for SOEs or subsidiaries in sectors not designated "pillar industries" such as property development. Thus, COLI, Franshion, China Resources Land, despite all being central SOEs, do not receive any ratings uplift. That said, the underlying ratings of these developers are still supported by strong access to domestic funding markets compared with their private-sector counterparts given their SOE status.

For SOE subsidiaries, Moody's assesses indirect state support through the parent, based on the subsidiary's importance to its parent and the country, as well as the latter's willingness and capacity to support the firm.

Chart 20: S&P's credit rating adjustments for LGFVs, SOEs, and bank senior, bank tier-2 and AT1



Source: Moody's

Fitch

FIs: understanding "the higher" approach with VR vs. IDR

Fitch adopts "the higher" approach of FIs. Generally, based on our understanding, the "the higher" means that, there are two approaches at the same time to get (1) a standalone rating of viability rating (VR; bottom up); and (2) issuer default rating (IDR). IDR is more likely to be top-down driven rating, as IDR is usually based on the Support Rating Floor (SRF), although Fitch still argues that IDR is partially based on VR as well. Then Fitch tends to use the higher of those two to determine the issuer rating and the bond rating. That means, the difference between VR and IDR should not be considered as a government support-driven uplift.

The most important implication, also the key difference of Fitch approach differs from S&P and Moody's is that: usually a downgrade of standalone rating of issuer should trigger a rating downgrade of its bonds. However, under "the higher" approach, we can think VR and IDR are separate approaches, when INR is higher than VR, a downgrade of VR should have little impact on the bond's IDR rating. For example, Postal Saving Banks' VR is bb+, IDR is A mainly because SRF is A.

For example, Postal Saving Banks senior is rated at A, mainly because of IDR at A, which is higher than VR at BB+. Assuming a downgrade of VR happens purely on fundamental reason of the bank itself, it is possible IDR does not change and both senior and AT1 will be not downgraded. It is also important to be noticed that the AT1 issue from the bank is rated at BB+, because the cap of bank capital rating is BB+ when IDR is A, instead of VR at bb+. So the change of VR even has little implication on the AT1 instruments.

Fitch's corporate framework: SCP vs. IDR

In Fitch's GRE framework, the analytical approach combines an analysis of the Standalone Credit Profile (SCP) and the likelihood of exceptional support in the case of financial difficulties at the GRE. A score card of strength of linkage and incentive to support are the key for the rating uplift. Regarding the SCP, Fitch also gives details of how the notching should be conducted with the considerations of rating of government/overall support. In the context of China, most GREs will be assigned a SCP rating, but with a few exceptions with weak fundamentals and usually IG ratings, e.g., ChemChina. Fitch usually claims the SCP for some SOEs are private information. Similar to the mechanism of VR vs IDR, SCP does not have direct implications for bond rating when Fitch uses the top-down approach. The difference between SCP and bond rating could not be considered as supporting uplifts. In the top-down approach, rather than SCP, sovereign rating would be the main driver of the rating changes.

LGFVs: top-down driven approaches

Officially, Fitch has no separate rating methodology for LGFVs or define LGFVs as a standalone sector. It seems to us that LGFVs' credit ratings are often more concise with little details of the financials of the issuers, as well as the support provider—the local government. As the local government does not require a credit rating from Fitch, the information of the local government is treated as private information. So in practice, most of the LGFVs do not have a SCP but with a few exceptions as well.

SOEs: more differentiation with bottom-up and standalone approaches

Based on the (1) overall supporting score, and (2) SCP vs. rating of the government, Fitch will decide one of the following three approaches for GREs.

1. **Top down:** Fitch rates central SOEs on a top-down basis from the sovereign rating (A+ Stable at Fitch) in cases where their standalone credit profiles are weaker than the sovereign and if their linkages with the sovereign are deemed to be strong. (i.e., CNPC, PetroChina, Chemchina).

2. **Bottom up:** A bottom-up methodology, where 1-3 notches of uplift are applied on top of standalone credit profiles, is applied to SOEs where linkages are assessed as moderate, and if Fitch believes that the sovereign might provide some tangible support during a time of financial distress. Normally, a single-notch uplift is applied, but occasionally two and, on rare occasions, three is possible.

3. **Standalone:** SOEs are rated on a standalone basis where government support is already embedded in the sector characteristics, or where the linkages are deemed to be weak (where Fitch views the sovereign is unlikely to provide tangible support in times of financial distress).

Exhibit 8: Fitch's standard to choose rating methodology

Notching Guideline Table	Equal or more than	Between	Between	Between	Between		Equal or less than
SCP of GRE vs. Rating of government/overall support score	45	35 43	27.5 33	20 25	15 18	12.5	10
Same or above	Standalone or constrained	Standalone or constrained	Standalone or constrained	Standalone or constrained	Standalone or constrained	Standalone or constrained	Standalone or constrained
Up to three notches away from government	Equalised	Equalised	Equalised	Top-down minus 1[a]	Bottom up + 1 capped at government minus 1	Bottom up + 1 capped at government minus 1	Standalone
Four notches away	Equalised	Top down minus 1	Top down minus 1	Top down minus 2	Bottom up + 1	Bottom up + 1	Standalone
More than four notches away from government or standalone r	Equalised	Top down minus 1	Top down minus 2	Top down minus 3	Bottom up + 2 or +3 capped at government minus 3[b]	Bottom up + 1[b]	Standalone[b]

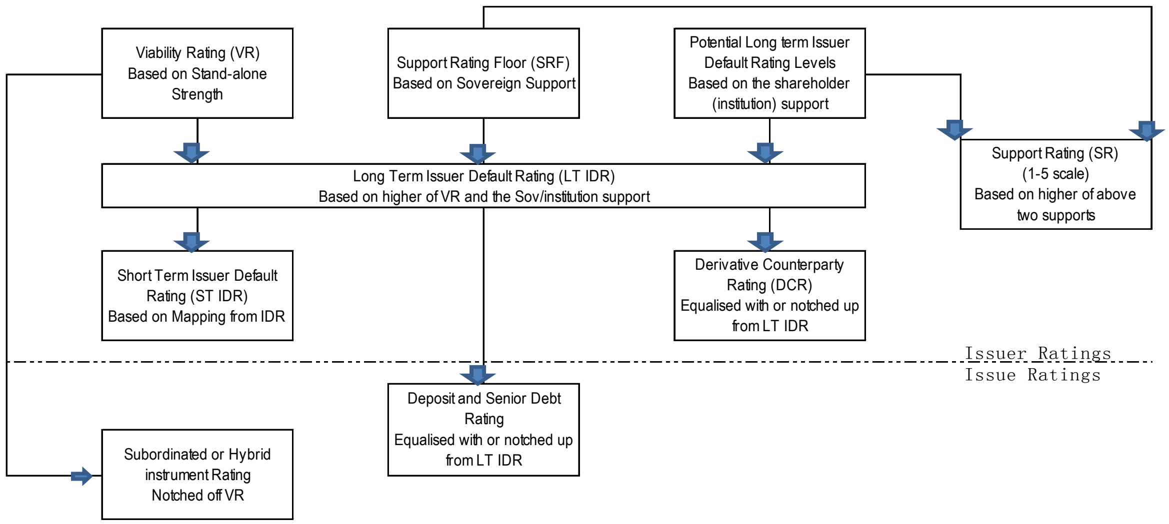
Source: Fitch

a. If the SCP of the GRE is one notch below the government and the credit drivers of the GRE are largely independent from those of the government, a one-notch uplift to the same rating as the government can also be considered

b. When the standalone is not assigned or not meaningful, entities for which the notching approach is bottom up or standalone would not be rated

c. The SCP may be 'not meaningful' when it the issuer cannot be effectively de-linked from the government - notably when the GRE primarily acts on behalf of the government to perform a policy driven mission and doesn't generate its own cash flows or because of very tight operational and financial links with the government.

Exhibit 9: Fitch rating methodology



Source: Fitch

Table 6: Fitch ratings of Corporate Government Related Entities (Excel) 2018-09-18

Ticker	Difference between IDR vs SCP (IDR-SCP)*	IDR	SCP	Approach	Notching based on GRE rating method
CHGRID	0	A+/Stable	A+	Standalone	Sovereign
SOPOWZ	1	A+/Stable	A	Equalized	Sovereign
YANTZE	4	A+/Stable	BBB	Equalized	Sovereign
CSLOCO	2	A+/Stable	A-	Equalized	Sovereign
BJASST	7	A+/Stable	BB	Equalized	Sovereign
SBSG	2	A/Stable	BBB+	Top Down	Sovereign -1
CHGDNU	9	A/Stable	B	Top Down	Sovereign -1
HUADIA	7	A/Stable	BB-	Top Down	Sovereign -1
CHCONS	2	A/Stable	BBB+	Top Down	Sovereign -1
DONFEN	2	A/Stable	BBB+	Top Down	Sovereign -1
POWINV	9	A/Stable	B	Top Down	Sovereign -1
SECGRP	1	A/Stable	A-	Top Down	Sovereign -1
ZHENGY	3	A/Stable	BBB	Top Down	Sovereign -1
CHCOMU	5	A-/Stable	BB	Top Down	Sovereign -2
HAOHUA	6	A-/Stable	BB-	Top Down	Sovereign -2
CHRAIL	3	A-/Stable	BBB-	Top Down	Sovereign -2
CHPWCN	5	A-/Stable	BB	Top Down	Sovereign -2
SHGANG	8	A-/Stable	B	Top Down	Sovereign -2
TSSTEE	7	BBB+/Stable	B	Top Down	Sovereign -2
BRTFOD	7	A-/Stable	B+	Top Down	Sovereign -2
MINMET	7	BBB+/Stable	B	Top Down	Sovereign -3
BJAUTO	3	BBB+/Stable	BB+	Top Down	Sovereign -3
GSELEC	6	BBB-/Stable	B-	Top Down	Sovereign -3
KMIRON	6	BBB/Stable	B	Top Down	Sovereign -3
YNPOWE	7	BBB/Stable	B-	Top Down	Sovereign -3
CNPCCH	0	A+/Stable	AA-	Capped	Capped by Sovereign
GRNLGR	0	BB-/Stable	BB-	Standalone	SCP
BCDHGR	2	BBB-/Negative	BB	Bottom Up	SCP+2
BEICAP	2	BBB/Negative	BB+	Bottom Up	SCP+2
SHCONS	2	BBB+/Stable	BBB-	Bottom Up	SCP+2
HUAYIG	2	BBB-/Stable	BB	Bottom Up	SCP+2
TEWOOC	3	BBB/Stable	BB	Bottom Up	SCP+3

Source: BofA Merrill Lynch Global Research, Fitch;
*based on our estimation by SCP and IDR. This is not the credit rating uplift based Fitch's rating methodology

Government support

Ownership

Compared with non-state-owned private companies, a majority of Chinese GREs benefit implicitly from government support. As an explicated indicator well covered by the rating agencies, the ownership by the government is the key indicator. GREs under our coverage are fully or partially owned by the Chinese government mainly via different three different agencies, State-owned Assets Supervision and Administration Commission (SASAC), the MoF, China Investment Corp (CIC) and local governments. As we discussed in the previous sector, most issuers will enjoy credit rating uplift by three international rating agencies.

Ownership facilitates GREs in accessing onshore and offshore financing

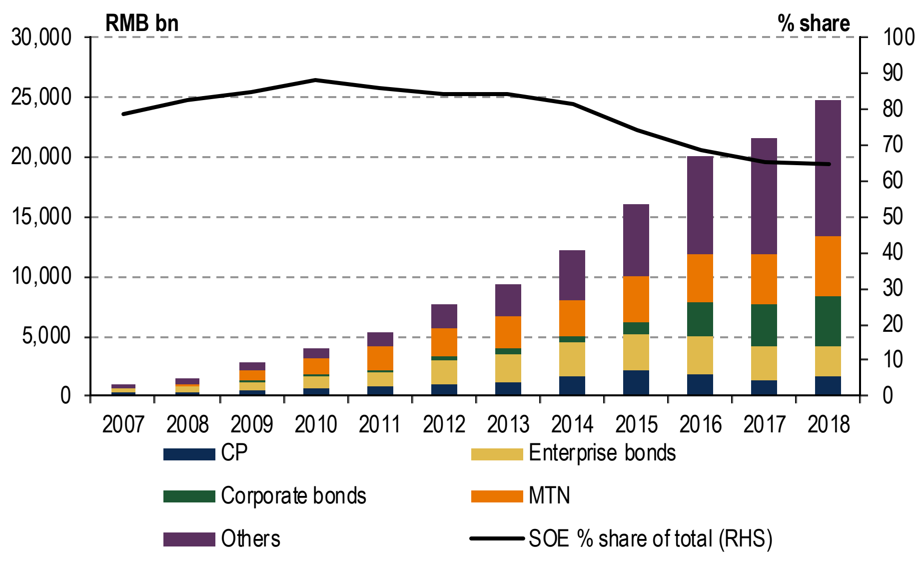
Unambiguously, the government-owned background has facilitated GREs in accessing onshore and offshore financing. We generally believe this is the key advantage for GREs vs private companies.

GREs in China's domestic bond market

Based on WIND, in China domestic credit bond market, state-owned financial institution and corporate account for about 65% with nearly RMB26tn (USD4tn) outstanding, against private enterprises at 7%, with around RMB4tn outstanding (USD620mn). SOEs have very diversified debt funding profiles across all possible channels in China onshore market. Medium-term notes (MTN), corporate bonds and financial bonds are the top-three categories accounting for 50% in total of GREs' debt financing.

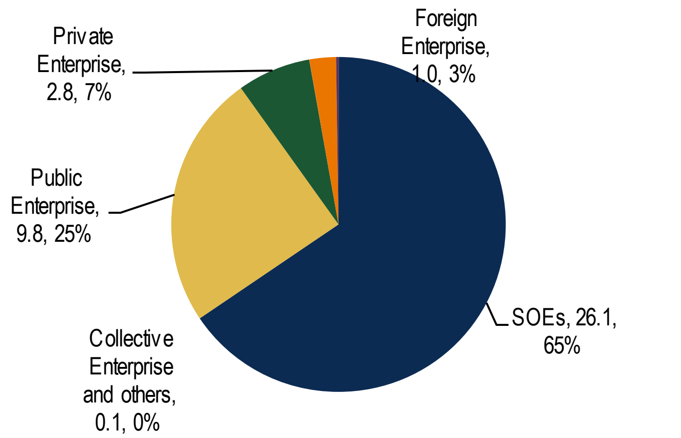
The funding costs of GREs are substantially lower than those of private enterprise. At end-April'19, the weighted average yield of GREs was 3.9% vs. that of private enterprises at 4.3%. To compare, the 3-year government bond yield was 2.9% and AAA-rate credit bond yield was 4%. Interestingly, due to more short-term instrument issued from GREs, the tenor for GREs is only 2.4 years vs. private companies' 3 years.

Chart 21: GRE issuance in China domestic credit bond market



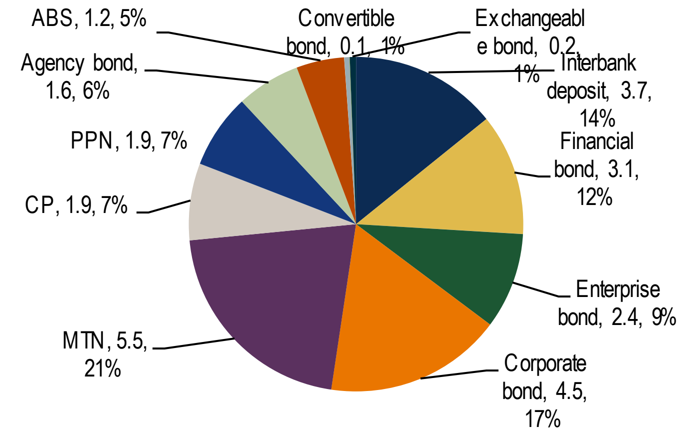
Source: BofA Merrill Lynch Global Research, WIND

Chart 22: China domestic credit bond market breakdown by ownership*



Source: BofA Merrill Lynch Global Research, WIND , in trillion RMB
*the SOEs here includes financial institutions based on WIND's definition

Chart 23: SOEs' debt financing is diversified across all possible channels

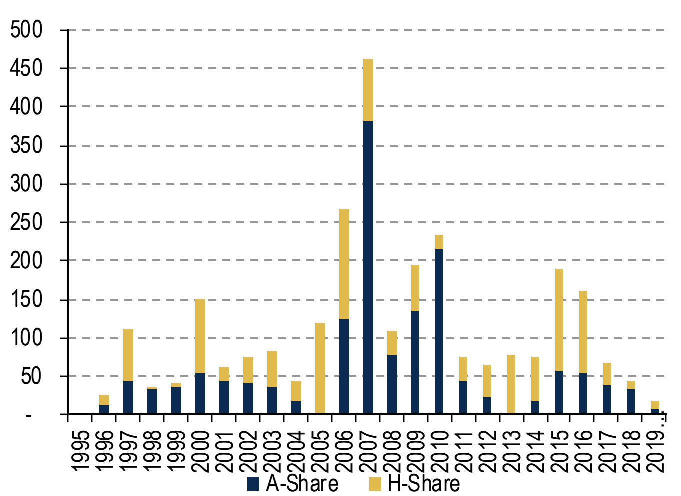


Source: BofA Merrill Lynch Global Research, WIND. in trillion RMB

GREs in China domestic equity market

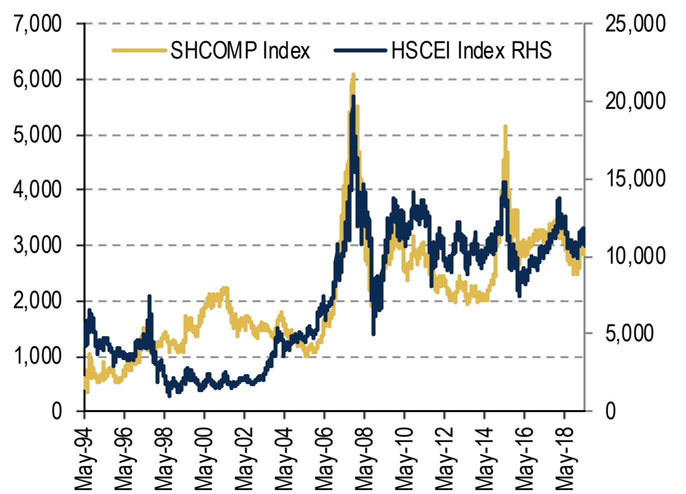
In terms of equity funding, GREs' advantage is less apparent vs that of POEs after the equity market crash in 2015. However, Chinese SOEs started to tap the equity market in early 1990s. The SOE reforms back to mid-2000s led to IPOs of many SOEs. The SOEs' core subsidiaries can be spun off, and transform them into a capital market standard limited company with common corporate governance structure. The following charts show that the volume of SOE IPOs in both the A-share and H-share markets peaked during 2005-07, raising RMB382bn (USD67bn) in 2007. Since then, SOEs have continued to raise funds in the equity market, picking up another RMB150-200bn annually in 2009 and 2010, as well as 2015 and 2016.

Chart 24: IPO of China GREs in domestic equity market



Source: BofA Merrill Lynch Global Research, WIND , in billion RMB, by the end of April'19

Chart 25: The dramatic equity volatility in 2008 and 2015



Source: BofA Merrill Lynch Global Research,

Government ownerships vs government's efforts of privatization

Along the history of GREs, many measures of the privatization of GREs have been announced, which seem like to weaken the government support. We agree that the overall trend of the support level has been moderately lower, but two principles are still important to remember:

1. **Government ownership is protected by** (1) 1x P/B ratio rule, which means to transfer the state-owned assets to private side should at a price at 1x P/B ratio at least or better to be above. If not, namely the price is below 1x P/B, it will be considered as cheap selling of state-owned assets; and (2) the government has a strong intention to keep absolute control over GREs. Some of the reform measures sound like privatization, e.g., mixed ownership, but a majority of the plan is difficult to implement given the governments' scrutiny over the valuation and other aspects of a deal. So it is not right to believe the government is trying to privatize SOEs after 2015, in contrast, the government control actually was strengthening after 2015, since the government needs more measures to stabilize growth. This is also called "the state enterprises advance, the private sectors retreat".

2. **Default risk of GREs remains generally low** due to social stability considerations. Learned from the reform in late-1990s, social stability has been the key consideration during any reform initiatives. Though defaults did happen, the different levels of authorities always tried their best to avoid an interruption of operations due to defaults, bankruptcies and even competition from private companies. Large-scale redundancy to increase efficiency has never been a common solution in practice.

Ownership of Central SOEs and SCI model

Some of the following charts/interpretations are from Asia Credit strategist Joyce Liang's primer on Chinese SOEs - IG: Chinese SOE bonds – A primer 10 September 2014, and Fitch report: China State-Owned Enterprises by Ying Wang, Kalai Pillay and Andrew Steel on 9 June 2014.

With a dual role of owner and supervisor, SASAC has a broad mandate, which includes drafting laws and regulations for central SOEs, managing and restructuring state assets, appointing and evaluating executives of SOEs under its supervision, and auditing state assets. SASAC also has the right to collect dividends from SOEs. SASAC currently owns and supervises 97 central SOEs. The number has come down significantly from the original 196 when SASAC was established in 2003 after the central SOE consolidation in 2004-07. For the similar content of FIs, we have highlighted Huijing model in the Evolution of GREs section: *FIs: a more advanced state-holding model, Huijin model*.

Supervisions: Management appointment/evaluation and investment approval

Senior leadership of Central SOEs is jointly appointed by SASAC and with a registration in Organization Dept. of Central CPC. The appointments are subject to annual performance evaluation by SASAC, which used to be focused primarily on the corporate scale and the size of revenue and profit. Given the focus of the performance evaluation before 2014, many SOEs tend to favor growth of capacity and production expansion over return on capital or efficiency. Since the deleveraging target was set up in 2018, many SOEs consider leveraging-up problems much seriously than before.

Generally, SOEs' management is given by SASAC a high degree of autonomy in making business decisions and running the day-to-day operations within the core business. Based on Fitch's report in 2014, they are only required to file their annual investment plans with SASAC and keep them informed if there is any investment beyond the initial plan. However, if the investments fall outside their core business area, they are subject to approval by SASAC. The proposal might be rejected by SASAC if it is not in line with the country's structural reform, especially if it is in industries with persistent overcapacity, among other reasons. After the anti-corruption scheme implemented in 2014 to 2015 (the head of Central SASAC, JIANG Jiemin, was taken away for investigation in June 2014), SASAC's control tightened. More corporate expanding plans were subject to the approval of SASAC, and even the scrutiny from the discipline inspection in the Party system will be in place in 2017 and 2018.

State capital investment (SCI) model

Apparently, the dual roles of shareholder and regulatory introduce two potential issues.

1. Conflict of interest. If certain regulations are not helping on the profitability, or even negative for operating efficiencies, e.g., capacity deduction, the implementation of the policy will not be in line with the essential purpose of the preservation and appreciation of state-owned assets. Thus, SASAC may face a dilemma which may weaken either the implementations of restrictions, or the profitability of the SOEs;

2. Some market-driven practices are constrains for SOEs directly under SASAC, either at Central or local level. For example, the salary-cap is widely implemented for highly ranked SOEs. However, a seriously-lower-than-market-standard payment could increase the typical agency problems of SOEs.

The state capital investment (SCI) model was rolled out in 2014 to address the aforementioned issues. SASAC selected State Development and Investment Co. (SDIC) and other SOEs to become state capital investment companies, similar to Temasek Holdings in Singapore. On behalf of SASAC, the SOEs will act like a holding company and play a solely shareholder role. In the future, it may replace SASAC, which will play solely as a regulator. The operating companies should enjoy higher autonomy, operate in a profit-driven manner but under certain restrictions. The structure here is more like a clear cut between the CIC, as a corporate holding company vs. PBoC and CBIRC, as regulators (Huijin model). However, the implementation of the new holding structure has been dragged by the legacy problems of cross-holdings, surplus labor force, and low profitability and greatly enhanced internal controls after 2015. We do not expect any major impacts from such a reform in the short term, as most USD issuers are like holding company with 100% owned by SASAC.

The ownership of FIs – Huijin model

In the financial sector, most of the structural reform has been done by the IPOs of most important FIs with Central Huijin as the holding company. As the parental company of Huijin, China Investment Corporation (CIC) was incorporated on in Sep'2007. It operates under the Company Law of China. The registered capital of CIC was $200 billion raised with the proceeds of the government bond issued by the Ministry of Finance in the amount of RMB 1,550 billion. Even being incorporated later than Huijin, CIC acquired Huijin as its subsidiary. The Huijin model became more stable with a corporate as a holding company in the Principal Provincial level. Based on CIC's annual report in 2017, the model enables Central Huijin to observe market practices and perform its obligations as the authorized representative of the state-owned capital investor.

Unlike SASAC, Central Huijin was the holding company which does not conduct regulatory mandates. It may encourage the FIs to carry out certain policy mandates, e.g., to the real economy, but mostly in a commercial-driven principle. Around 100 board of directors worked in important China FIs are appointed and managed by Central Huijin.

As CIC is a corporate instead of government agency, it may not be right to simply see Huijing/CIC as another SASAC in the financial sector. The Huijin model is more advanced with the separation of shareholding and supervision, thus it becomes the blueprint of SOEs' SCI model. As stated in CIC's annual report, "*Central Huijin manages its equity holdings through market-oriented and professional methods and exercises its shareholder rights granted by the law to participate in the decision-making of its holding companies without interfering in their day-to-day operations.*

As the representative of the investor in state-owned capital, it dispatches directors to its holding companies to the extent of its capital contribution, closely tracks the operations and risks of the companies, organizes periodic assessments, and issues "management recommendation letters" and "risk warning letters".

For more details on the principles and functions, please see the following charts.

Exhibit 10: Key highlight of Huijin Model- Four principles

Source: BofA Merrill Lynch Global Research, CIC annual report 2017.

Exhibit 11: Key highlight of Huijin Model- Three key platforms

Platform for the reform of and capital injection into state-owned financial institutions

- Since 2003, Central Huijin has injected capital into the five commercial banks, namely, ICBC, ABC, BOC, CCB and China Everbright Bank. It also initiated a series of market-oriented reforms, such as facilitating financial restructuring, revamping the shareholding system, bringing in strategic investors and supporting their public offering. Since 2005, it has helped nine securities companies out of difficulties through market-oriented approaches, and injected capital into the China Reinsurance (Group) Corporation and New China Life Insurance Co., Ltd. Since 2007, it has also injected capital into China Development Bank and China Export & Import Credit Insurance Corporation actively looking into governance models suitable for development and policy financial institutions.

Platform for the investment and operation of state-owned financial capital

- Central Huijin has facilitated the public offerings of 11 holding companies, including ICBC, ABC, BOC, CCB, China Everbright Bank, China Reinsurance (Group) Corporation, New China Life Insurance Co., Ltd, China Galaxy Securities, Shenwan Hongyuan Securities, China International Capital Corporation, and China Securities. It also assisted in the merger of Shenyin & Wanguo Securities Co., Ltd and Hongyuan Securities, and the merger of China International Capital Corporation and China Investment Securities. It has exited from some non-systemically-important financial institutions through share swaps and listing transfers. And it has taken steady steps to trade, in the secondary market, the A shares of its holding companies and exchange-traded funds.

Platform for the management of state-owned financial equity

- Central Huijin manages its equity holdings through market-oriented and professional methods and exercises its shareholder rights granted by the law to participate in the decision-making of its holding companies without interfering in their day-to-day operations. As the representative of the investor in state-owned capital, it dispatches directors to its holding companies to the extent of its capital contribution, closely tracks the operations and risks of the companies, organizes periodic assessments, and issues “management recommendation letters” and “risk warning letters”.

Source: BofA Merrill Lynch Global Research, CIC annual report 2017

GREs with same government ownership % may have different levels of support

Having said that the government ownership is important and explicit, some high-level SOEs may have different levels of support, with the same effective government ownership and the ownership structure. Therefore the strategic industries and administration level would be another ways to do the cross-check as a reference, especially when the rating agencies’ opinion is not available.

Not all of the 97 SOEs owned by Central SASAC enjoy the same level of support; about provincial 50 SOEs have stronger government support vs the rest. In the financial sector, CIC and the MoF, two provincial level institutions, wholly or partially hold a number of FIs. From a holding structure perspective, the government support levels are the same, but Big 5 banks and top 4 insurers with Party Chief at provincial level have higher level of support than others. For LGFVs relying on government support, it is important to understand whether it is in provincial or sub-provincial level, and further more it is in city level or county level. And more importantly, ownership structure could be misleading, with some enterprises with some government ownership actually may not get any government support when there is repayment risk.

Strategic industries

The common features of those three groups as GREs are government ownerships, hence support. However, the level of government support varies depending on the importance of the company in the overall economy, as well as the administration system. As we have discussed in Significance of China's GREs, most of GREs are located strategically importance sectors, such as energy, banking, and utility. The ratings are also generally high with 36% are same of sovereign rating at high-single A, while HY-rated SOEs is only 5% of the GREs universe.

Strategic industries and pillar industrials

The first tranche of important industrials are defined in an interview with the governor of Central SASAC in 2006, there are **seven pillar industrials**: military, power generation and transmission, petroleum and petrochemical, telecommunications, coal and mining, aviation and shipping. Nowadays, it is commonly believed that there are seven **strategic industries** of critical importance to national and economic security: defense, power generation and distribution, oil and petrochemicals, telecommunications, coal, civil aviation, and shipping. More importantly, in 2013, SASAC had indicated that the government will keep absolute control of central SOEs operating in the strategic industries and strong, but not necessarily majority stakes in those operating in the pillar industries.

Backbone SOEs in strategic industries

As defined by SASAC, 49 Central SOEs are backbone SOEs out of 97 left now (see Appendix 3). The backbone SOEs tend to be much larger in scale due to the legacy of their predecessors, including the disbanded ministries and commissions. The 49 backbone SOEs together represent about 85% of the total SASAC-administered SOEs' assets, and 80% of revenues at end-2012, based on Fitch's report. While most of the remaining SASAC-administered SOEs are smaller and do not operate in either the strategic or pillar industries, some are very big and are mandated with strategic tasks, such as China General Nuclear Power Corporation, China Railway Engineering Corporation and China Railway Construction Corporation.

What if policy mandates weaken the fundamentals of strategic GREs?

Historically, we have found a direct financial support of GREs in oil and power sector, when their policy mandate hurt their profitability. Back in 2013, SASAC used to provide direct financial support to central SOEs with funds from the state capital management budget, which is funded with profit remittances from participating SOEs and is subject to co-approval from SASAC and the MoF. Such budget reached RMB106bn in 2013. In the past, such direct support has mostly been in the form of state equity injections into financially challenged SOEs in strategic sectors, which suffered losses due to the government-imposed policies that benefitted social interests, but eroded their standalone financial profiles. For example, the government provided Sinopec with around RMB50bn in subsidies for losses in its refinery business in 2008, which arose from government's control on refined oil prices. Also, the big five state-owned power generation groups, together accounting for half of China's installed generation capacity, suffered significant losses in 2011 as they were not able to pass through coal price increases to end-users given NDRC's on-grid tariff controls to curb inflation. To partially compensate for the losses, SASAC made an equity injection of RMB1.2bn into each of these five groups in 2013. While after 2013, the support tended to be more from the policy side rather than direct financing.

In addition to financial support, central SOEs might also benefit from policy support. For example, SASAC has managed in the past to request significant one-off tax reductions directly from the State Council for an SOE in the power sector.

But at the same time, central SOEs might also be mandated with policy tasks. For example, central SOEs are the government's main tool to acquire resources and technology from overseas. While the ultimate investment decision and day-to-day management of the overseas assets lies with SOE management, SASAC together with the NDRC and the Ministry of Commerce, has drafted a series of rules to encourage SOEs' overseas investment and to strengthen oversight in the quality of such investments.

How rating agencies look at support via ownership and industrials

As the key indicator of GREs in capital market, we compare the rating uplifts for different categories: IG LGFV has the highest uplift up of 6-7 notches. S&P used to have the record highest uplift of 8 notches (from b to A-) back to 2017 in the sector. NBFIs have the second highest rating uplift and BBB SOEs ranked the third. Usually, 2-4 notches rating uplift is a general case for China SOEs. While, we also have bank capital that does not have uplifts in the GREs universe.

Table 7: Credit rating uplifts of China GREs

Max rating upper lift	Bank senior	T2	NBFI	T1	1st tier SOEs	2nd tier SOEs	BBB SOEs	HY SOEs	IG LGFV	HY LGFV
Moody's	3	0	7	0	2	4	4	0	7	0
S&P	2	0	4	0	0	4	4	0	8 (2015-2017), 7 now*	0
Fitch**	5	3			3	6	1	0	6	0
Example for Moody's	**BCHINA**	**BCHINA**	**HUARONG**	**BCHINA**	**SINOPE**	**SINOCH**	**CITLTD**	**CHIOIL**	**BEIJII**	**JINANC**
Moody's bond rating	A1	Baa2	A3	Ba1	A1	A3	A3	Ba2	A1	**B3**
Moody's Baseline	baa1	baa1	b1	baa1	a3	ba1	ba1	NA	baa2	NA
Example for S&P	**BCHINA**	**BCHINA**	**HUARONG**	**BCHINA**	**SINOPE**	**SINOCH**	**CITLTD**	**CHIOIL**	**BINHCO**	**ZOOMLI**
S&P's bond rating	A	BBB+	BBB+	BB	A+	A-	BBB+	BB	A- (2015-2017), BBB now *	**B**
SACP	bbb+	bbb+	bb	bbb+	a+	bb+	bb	bb	b	b
Example for Fitch	**BCHINA**	**BCHINA**	**HUARONG**		**SINOPE**	**SINOCH**	**CHIOLI**	**CHALHK**	**AHTRHK**	**ZOOMLI**
Fitch's bond rating	A	BBB+	A		A+	A	A-	BBB+	BBB+	B-
VR rating	bb+	bb+	NA		BBB+	BB	BBB+	NA	b+	NA

Source: BofA Merrill Lynch Global Research; credit rating data is as of Mar.'19.

*BINHCO used to be rated at A- in 2017, but was downgraded at July'17 and Sept.'18, and currently rated at BBB

** We compare the Fitch's VR ratings vs. Fitch's bond rating to derive the rating uplift.

Bond structures

Three main structures

Some of the following charts/interpretations are from Asia Credit strategist Joyce Liang's primer on Chinese SOEs - IG: Chinese SOE bonds – A primer 10 September 2014.

Due to capital-account controls by the Chinese government, the structure of offshore bonds is not a very straight forward one. There are three major structures adopted by LGFVs to issue bonds offshore: (1) onshore holdco keepwell structure; (2) direct issuance structure; (3) onshore holdco guarantee structure. Meanwhile, by the end of section, we will also briefly discuss standby letter of credit (SBLC), which has a small standing size, the eventful year of 2019, and likely to have little issuance going forward.

Among the three structures, onshore holdco keepwell structure is the most popular, given its ease of execution as there is no approval or registration required with regulators before issuance.

The onshore holdco keepwell structure is also considered the weakest structure among the three. While keepwell agreements are enforceable under international law and breach of any undertakings by the onshore parent represents an event of default of the notes, they are different from an explicit guarantee in terms of the nature of judgment and procedures of enforcement under the New York law. There is no precedence of such litigation against Chinese corporates so far. Also, enforcement of the keepwell agreements might require consent or approvals from relevant Chinese regulators, including the State Administration of Foreign Exchange (SAFE), given the capital control in place. This creates uncertainty as to whether these documents will allow onshore companies to provide timely support when needed, that is when the offshore subsidiary is at or near insolvency. Legal opinions given pursuant to bonds issued and supported by these structures, and risk factors in bond offering circular documentation, make such execution risks clear. Moody's and S&P in general bring down the bond ratings by one or two notches from the rating of keepwell providers, while Fitch tends to equalize the bond rating with the keepwell provider's rating believing the strong linkage between the issuer and the onshore LGFV parent.

After the central government relaxed the criteria for Chinese companies to directly issue offshore debt and grant cross-border guarantee, we have seen more issuance adopting the direct issuance structure or onshore holdco guarantee structure, and we expect this trend to continue. We consider these two structures are equally strong. All three rating agencies equalize the bond rating with the rating of the issuer in the case of direct issuance or the rating of the guarantor in the case of onshore holdco guarantee structure.

Direct issuance structure

For Chinese companies incorporated in the mainland (the onshore holdco) to issue offshore bond directly, an approval from the NDRC on a case-by-case basis was needed in the past. This used to pose a significant hurdle for offshore bond direct issuance by companies incorporated in mainland China, therefore such a structure was not observed before September'15 when the NDRC announced the scrapping of the approval requirement and replaced it with a pre-issuance registration and post-issuance filing system. However, despite the easing of NDRC's control, it is still uncommon for Chinese companies to adopt the direct issuance structure, with rare examples including Hangzhou Hikvision Digital Technology Co., Ltd. (HIKVIS), Yunnan Provincial Investment Holdings Group Co., Ltd. (YUNINV) and Chongqing Nan'an Urban Construction & Development (Group) Co., Ltd. (CQNANA).

Onshore holdco guarantee structure

For Chinese companies incorporated in the mainland (the onshore holdco), one way to issue offshore bond is to issue the bonds through a wholly-owned offshore special purpose vehicle (SPV) and to provide an explicit guarantee on such bonds. Such a structure should equalize the bond rating with the senior unsecured rating of the guarantor, namely the onshore holdco.

Until recently, such a structure was seldom used by Chinese issuers because: (1) companies incorporated in mainland China needed approvals from SAFE and other regulators to provide guarantees on any offshore liabilities; and (2) the approval process was lengthy and cumbersome. Only a small number of high-profile SOEs, such as State Grid Corporation of China (CHGRID), China Petrochemical Corporation (SINOPE) and Baosteel Group Corporation (SBSG), could obtain the approval from SAFE to support offshore bonds raised for strategic overseas acquisitions or to meet offshore funding needs.

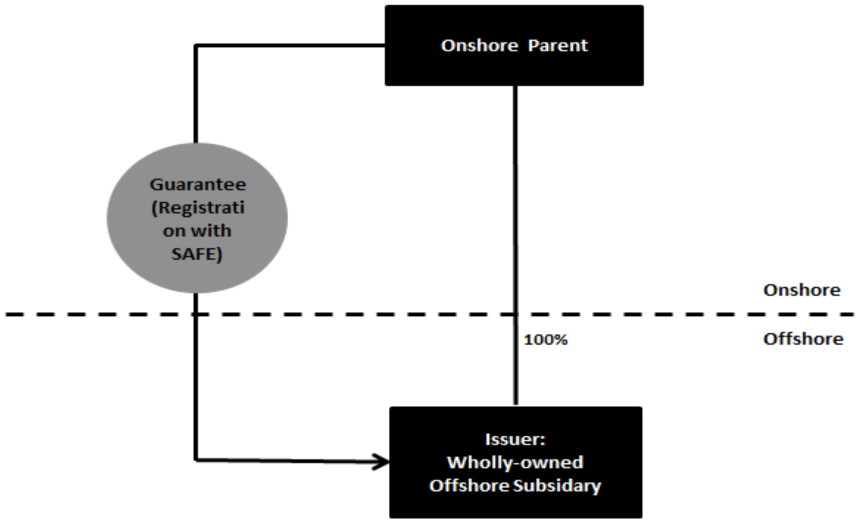
The Article No.29 issued by SAFE in May'14 allows onshore companies to register cross-border guarantees with SAFE, rather than seeking prior approval from SAFE. However, the use of proceeds from cross-border guarantees was still subject to conditions like:

- The guaranteed offshore funds could not be moved onshore through loans or equity investments to support onshore operations or debt refinancing, unless approved by SAFE.
- They were to be used only for the offshore subsidiaries' normal business scope, and not for speculative transactions and pure arbitrage trades that take advantage of differences in interest rates or foreign exchange rates.
- The proceeds could only be used for projects approved by relevant authorities that are responsible for approval for overseas investments.

SAFE continues to optimize the foreign debt regime and further relax the restriction on the use of proceeds from offshore bond issuance by companies incorporated in mainland China (Article No.16 issued in June'16). Issuers are now allowed to use the funds raised for their actual business needs and the only restrictions are:

- The proceeds cannot be used outside the business scopes of the issuer.
- They cannot be invested in any securities or wealth management products, except for banks' principal-protected investment products.
- The issuer cannot lend the proceeds raised to non-related third parties.
- The offshore funds cannot be used to construct or purchase real estate properties.

Exhibit 12: Onshore holdco guarantee structure



Source: BofA Merrill Lynch Global Research, bond documentation

It is also worth noting that while a pre-approval is not required from SAFE, it can reject registered guarantees if it finds problems with their authenticity, commercial reasonability or compliance with regulations. SAFE can also impose penalties for breaches of the cross-border guarantee policy. Therefore, it is important for offshore bond investors to validate the purpose of the bonds, the final registration of the cross-border guarantee and the relevant parties' track record of compliance with foreign exchange regulations.

Onshore holdco keepwell structure

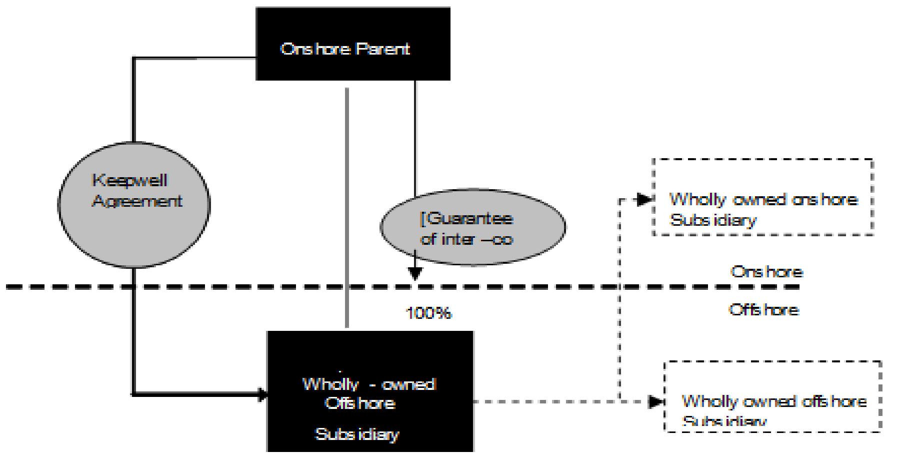
For Chinese companies incorporated in the mainland (the onshore holdco), another way to issue offshore bonds is to issue through a wholly owned offshore SPV and to provide credit enhancement on such bonds in the form of "keepwell agreements". The keepwell agreements require, among other things, that (1) onshore holdco maintains 100% controlling interest in the wholly owned offshore subsidiary; and (2) onshore holdco is obliged to make sufficient funds available to the wholly owned offshore subsidiary in the event of a payment default on the part of the wholly owned subsidiary.

Keepwell agreements are viewed as stronger than a "Letter of Credit" but weaker than an explicit guarantee. The keepwell agreements are enforceable under international law and breach of any undertakings by the onshore parent represents an event of default, per the notes. However, they are different from an explicit guarantee in terms of the nature of judgment and procedures of enforcement under the New York law. There is no precedence of such litigation against Chinese corporates available so far.

Also, enforcement of the keepwell agreements might require consent or approvals from relevant Chinese regulators, including SAFE, given the capital control in place. This creates uncertainty as to whether these documents will allow onshore companies to provide timely support when needed, namely when the offshore subsidiary is at or near insolvency. Legal opinions given pursuant to bonds issued and supported by these structures, and risk factors in bond offering circular documentation, make such execution risks clear.

Rating agencies take into account both the transaction structure and keepwell providers' linkage to the issuer when coming up with the bond rating. For offshore LGFV bonds, Moody's and S&P in general bring down the bond ratings by one or two notches from the rating of keepwell providers, while Fitch tends to equalize the bond rating with the keepwell provider's rating, taking into account the strong linkage between the issuer and the onshore LGFV parent.

Exhibit 13: Onshore holdco keepwell structure



Source: BofA Merrill Lynch Global Research, bond documentation

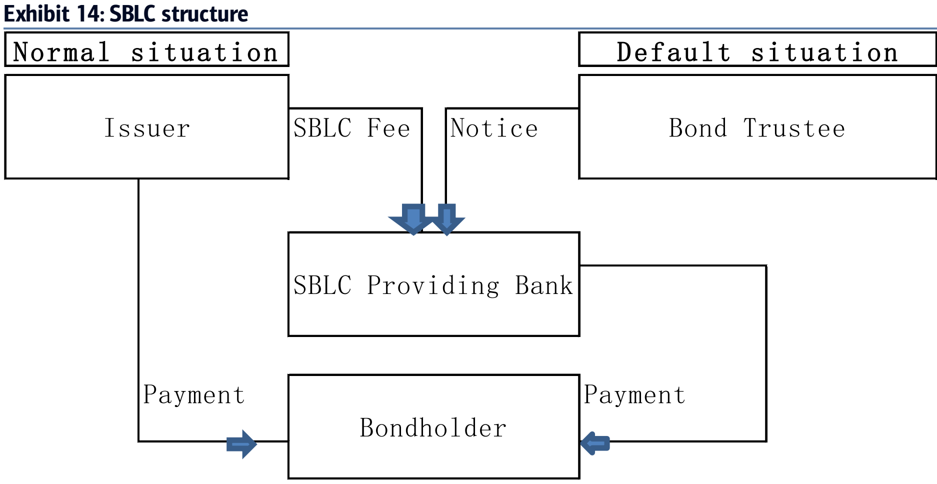
Standby Letter of Credit (SBLC)

Some of the following charts/interpretations are from [Asian Credit Strategy: Credit enhancement: Like make-up for bonds 01 November 2013] by Michele Barlow.

What is Standby Letter of Credit (SBLC)?

A SBLC serves as a secondary payment mechanism in the event that the borrower is unable to pay either its coupon or principal. It is not a direct bank guarantee, it acts more like insurance. Thus it is considered a contingent liability which is not accounted for on balance sheet. However, it will be included in the calculation of a bank's credit exposure limits to a particular group/sector and will attract a capital charge similar to on-balance sheet loans. In Asia dollar bond market, the first SBLC dollar bond was issued in early 2010s from Zijin Mining Group Co. Ltd. with the SBLC provided by Bank of China. Currently, SBLC has a small standing size at about USD7.6bn with average duration of about 1.2 years. It has an eventful year of 2019 so. It is unlikely to have little issuance going forward, in our view.

Exhibit 14: SBLC structure



Source: Moody's

How rating agencies look at SBLC

The rating agencies will rate SBLCs at the same level of the issuing bank if support is readily available to bondholders, the amount is sufficient to cover the interest accrued during the longest possible period between the last payment made before the default and the payment for principal after default, the mechanism allows for timely payment of interest and principal and the SBLC is legally enforceable. This allows a company to raise funding more cheaply.

Why banks want to provide SBLC

By offering this insurance, the bank will receive fee income from the issuer. The fees paid by issuers will vary based on the underlying riskiness of the company and the level of collateral that may or may not be provided to the bank. Fees are negotiated between the issuer and the bank, and are not disclosed as part of the documentation. However, it is understood that the fee levels can be as much as 300bp. If the fee levels are higher, the costs may be prohibitive for the issuer. After all, the rationale behind seeking insurance from a bank is to reduce the company's cost of funding by enhancing their credit quality via the SBLC.

Why there was SBLC in the past …

The rationale behind bond issuers to seek this insurance from a bank is to reduce the company's cost of funding by enhancing their credit via the SBLC. The fees paid by issuers will vary based on the underlying riskiness of the company and the level of collateral that may or may not be provided to the bank. Fees are negotiated between the issuer and the bank, and are not disclosed as part of the documentation. However, it is understood that the fee levels can be as much as 300bp in early years of the asset class in 2013 to 2015. If the fee levels are higher, the costs may be prohibitive for the issuer. So supply to some extent will be driven by whether the cost of the SBLC coupon plus fee charge is cheaper than where they may be able to borrow from banks (if they have access).

How reliable is SBLC, and why there should be less issuance in the future?

The SBLC bonds are given the same ratings of the banks that issue them, and legal opinions are provided on the bonds and the structure which implies the SBLC is irrevocable, unconditional and enforceable. In the standard offering circular, there is usually a chapter called *summary of payment arrangement on each scheduled due date under the SBLC bond*, which would be useful to see how and when the SBLC provider will step in and conduct the payment. We generally believe SBLC is a very strong credit enhancement. Having said that, the tail risks in our views are:

1. Capital account control in China may make the bank's (SBLC provider) payment complicated if the bank is located in the China onshore market;

2. Other unknown legal issues between the SBLC providers and issuers, e.g., lawsuit over accounting matters from the bank to add uncertainties on the payments;

3. Keepwell letter may further make the process longer, as there are more confusion regarding the issuer, the keepwell letter provider and the SBLC letter provider.

As we publish this report, there has been no testing case of above risks, but only a few cases of SBLC-protected issuers with repayment risks such as China Minsheng Investment and LGFVs in Tianjin. Those cases would be interesting in the capital market; however, as the bank may reconsider the potential risk of providing such SBLC, and may ask higher fees going forward, especially for the weak issuers, we do not expect the supply of USD SBLC to continue in the near term.

Valuation of Government-related entities

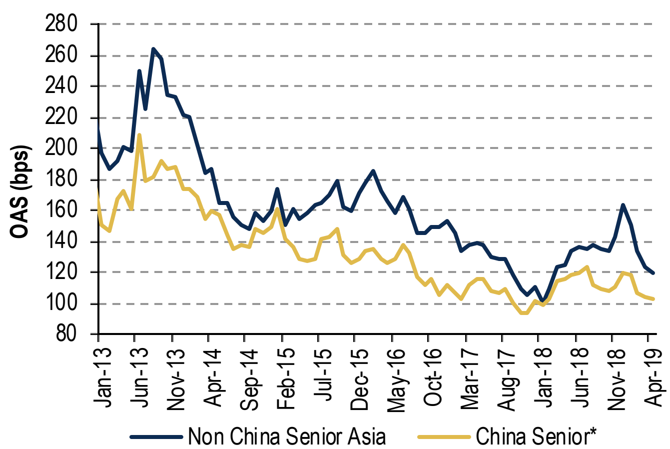
Financial Institutions

Seniors and 2nd tier

We compare China senior bonds from banks and NBFIs with Asia peers. We found the senior bonds in GREs are more stable, trading largely below 120bp for credit spread after May 2016. NBFIs should be the main drivers of the widening in 2018. The strong cross-subscription we used to discuss in the *Investor bases* would be main reason for bank seniors' low volatility nature.

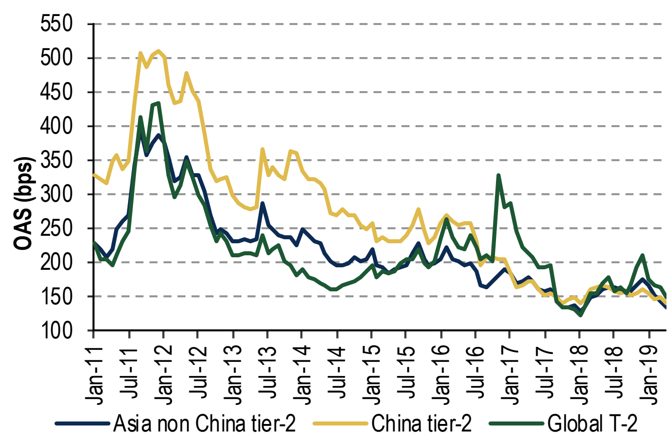
The 2nd tier space, as it has the highest foreign participations, moves generally in line with global tier-2 but appeared to be more stable in 2H16 due to a series of credit events in Europe, e.g., BREXIT, non-call of legacy tier-1 from Standard Chartered Bank, Italian Constitutional Referendum, etc. In the past, China tier-2 used to offer a risk premium: 100bp in 2014 and before, around 50bp in 2015 and 2016. However, since 2017, 2nd tier has started to trade in line with Asian/Global peers at historical tight level.

Chart 26: China seniors trade tighter and more stable than Asian peers



Source: : BofA Merrill Lynch Global Research,
*including NBFIs bond

Chart 27: China tier-2' premium over Asian/Global peers largely diminished in 2018



Source: BofA Merrill Lynch Global Research,

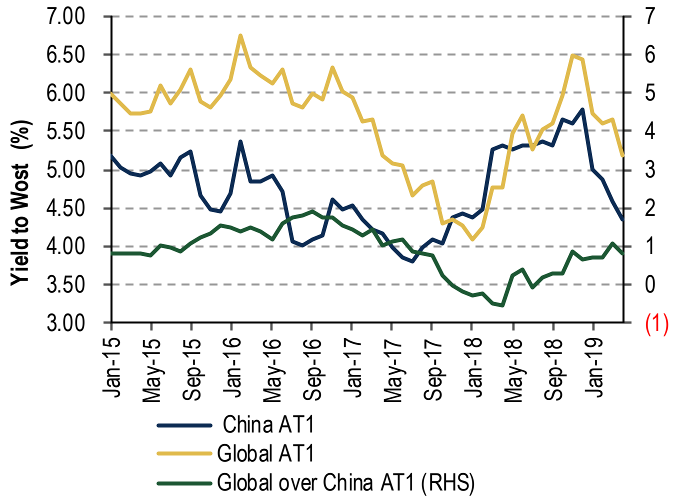
AT1 and non-banking financial institutions (NBFIs)

AT1 in the GREs space appears to be lower yielding vs. Global, mainly European, COCOs, driven by its dedicated Asian investor base. From a forward-looking perspective, the onshore cross-subscription of banks' capita would further push the valuation of GREs' AT1 to decouple from European COCOs.

In terms of NBFIs, we generally compare NBFIs with banks senior given their business is mostly related with commercial banks, especially Big 5. For instance, the largest NBFI sector is AMCs, whose main operations are managing the non performing assets from banks; and the second largest group is leasing sector, with Big 5 being their parents. As shown in the following graph, AMCs used to trade 50-100bp wider than banks' 10-year seniors bonds. Currently, the premium is largely below 50bp.

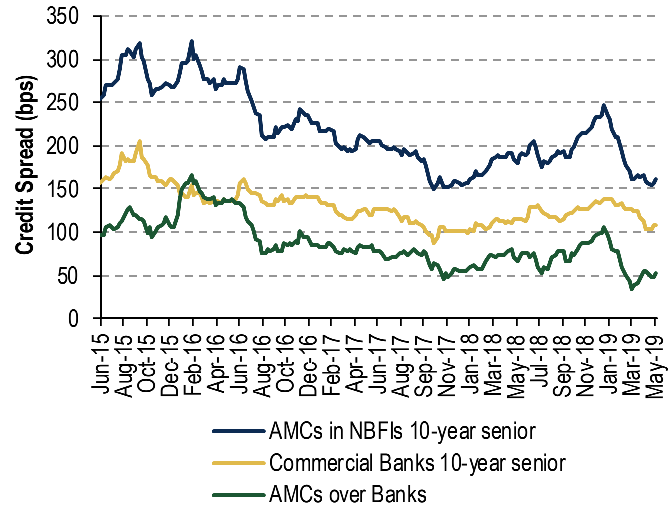
We generally disagree with comparing NBFIs with bank tier-2, although they all seem like a touch weaker than bank seniors at BBB ratings. Basel III capital has their special structure risk, e.g., bail-in, which has never been tested in Asia yet. While, senior unsecured bond's risk premium offered by NBFIs is more about fundamentals and parental support. So it is difficult to compare those kinds of different risks, in our view.

Chart 28: Yield for China AT1 is 1ppt lower than that of Global AT1



Source: BofA Merrill Lynch Global Research,

Chart 29: AMCs in NBFIs offers 50bp premium over commercials banks



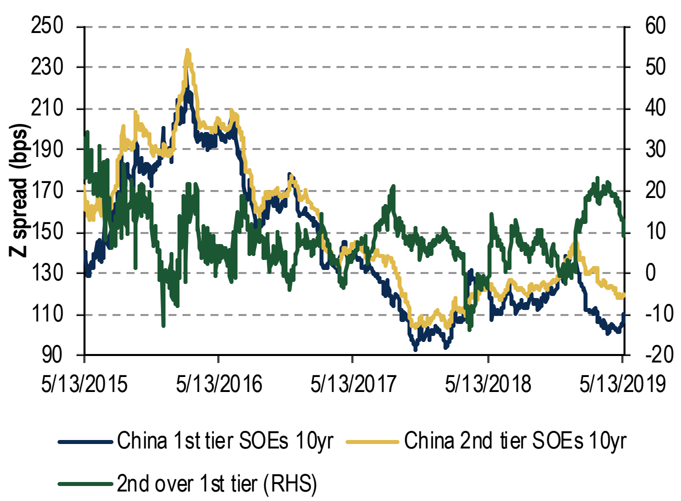
Source: BofA Merrill Lynch Global Research,

State Owned Enterprises (SOEs)

1st tier SOEs vs 2nd tier SOEs / BBB SOEs

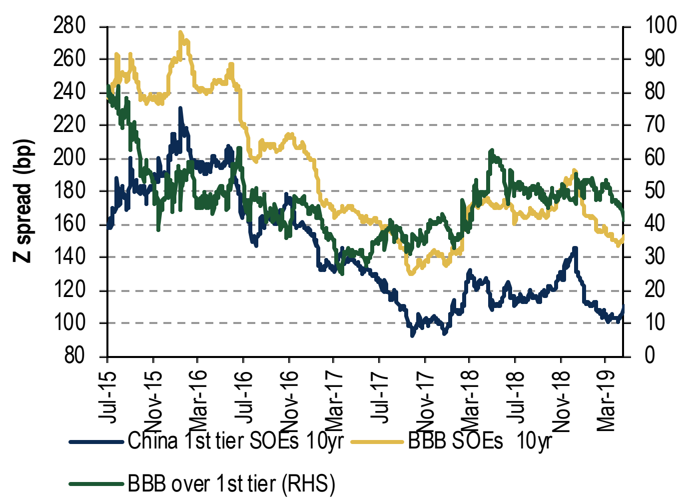
We use 1st SOEs, mainly driven by oil major names, to compare with 2nd tier SOEs and BBB SOEs. The risk premium has been stable at around 50bp for BBB since end-2017 through market volatilities. While, for 2nd SOEs, the spread difference is only around 10bp and could trade tighter than 1st tier SOEs.

Chart 30: 2nd tier SOEs trade 10bp over 1st tier SOEs



Source: BofA Merrill Lynch Global Research,

Chart 31: BBB SOEs trade 40bp overs 1st tier SOEs



Source: BofA Merrill Lynch Global Research,

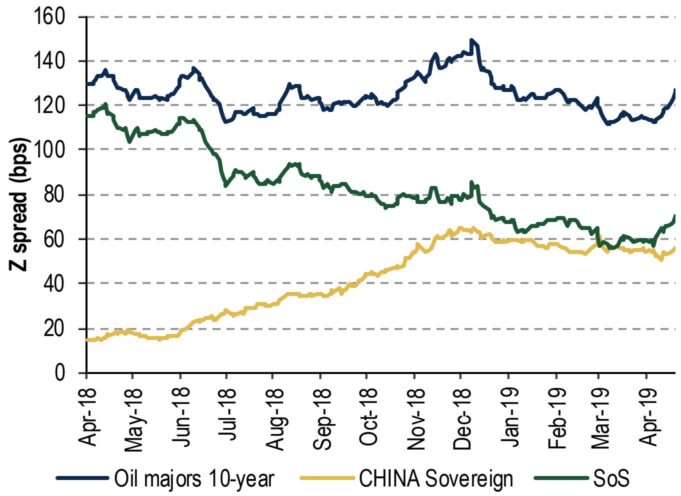
Spread over sovereign (SOS) seems not effective

As we have discussed in *GREs USD bonds: proxy of China sovereign dollar bonds*, China's USD sovereign bond has a small universe of about USD5bn, with a short track record since October'17. Thus being different from other EM countries, (SOS) seems not effective for China GREs. For instance, the SOS changes are mainly driven by the widening of China's 10-year sovereign bond with unclear implications to us.

A-rated SOEs vs China tech-names

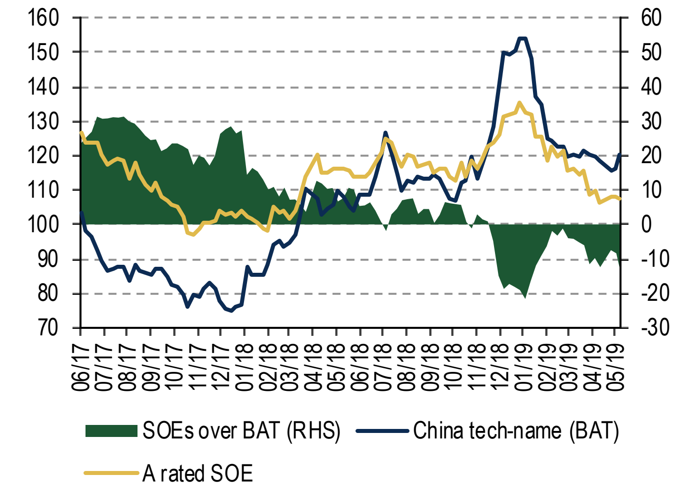
Given the high participations from foreign investors, we compare A-rated SOEs with similar rated China tech names, e.g., Baidu, Alibaba and Tencent (BAT). The below chart shows that the SOEs used to trade 30bp wider than tech names before the US-China trade tensions. However, the tech names appeared to be high beta, and during the market volatility since end-2018, they have underperformed SOEs.

Chart 32: China SOS: Oil majors show weak linkage vs Sovereign bonds



Source: BofA Merrill Lynch Global Research,

Chart 33: A-rated SOEs vs Tech-name BAT (Z-spread)

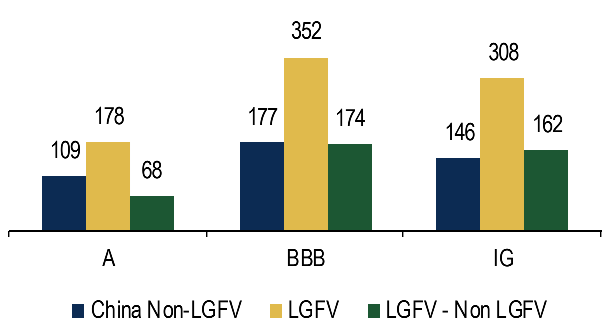


Source: BofA Merrill Lynch Global Research,

LGFVs

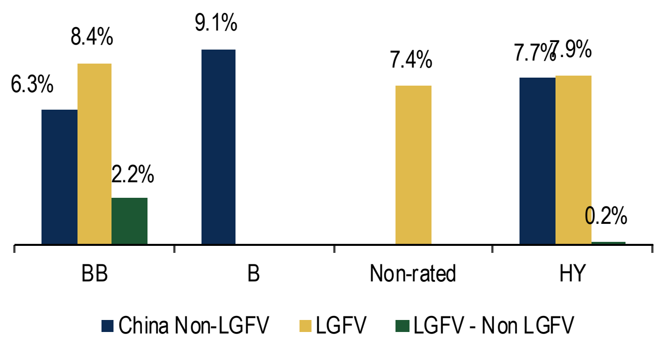
As the most segmented group in the GREs space, LGFVs have their own dedicated investor base, mainly Chinese investors with insights into China onshore bond market. When dealing with LGFVs, the commercial banks and Chinese fund managers could leverage their great access to the information in China domestic loan/bond market. Banks' China onshore credit lines and the risk dept.'s approvals play key roles amid their investment decision making process. The mindset here is similar to SOEs. So for IG LGFVs, we generally compare it with China IG-rated non-LGFVs, mostly SOEs. For HY, we just compare it with China non-LGFV HY, mostly real estate and industrial names.

Exhibit 15: IG LGFV vs IG rated China Non-LGFV corporate bonds



Source: BofA Merrill Lynch Global Research. MoF, State Council. Dollar price is as of 1 MAY 2019.

Exhibit 16: HY LGFV vs HY China Non-LGFV corporate bonds



Source: BofA Merrill Lynch Global Research. MoF, State Council. Dollar price is as of 1 MAY 2019.

Evolution of GREs

Who has the highest gov't support based on evolution?

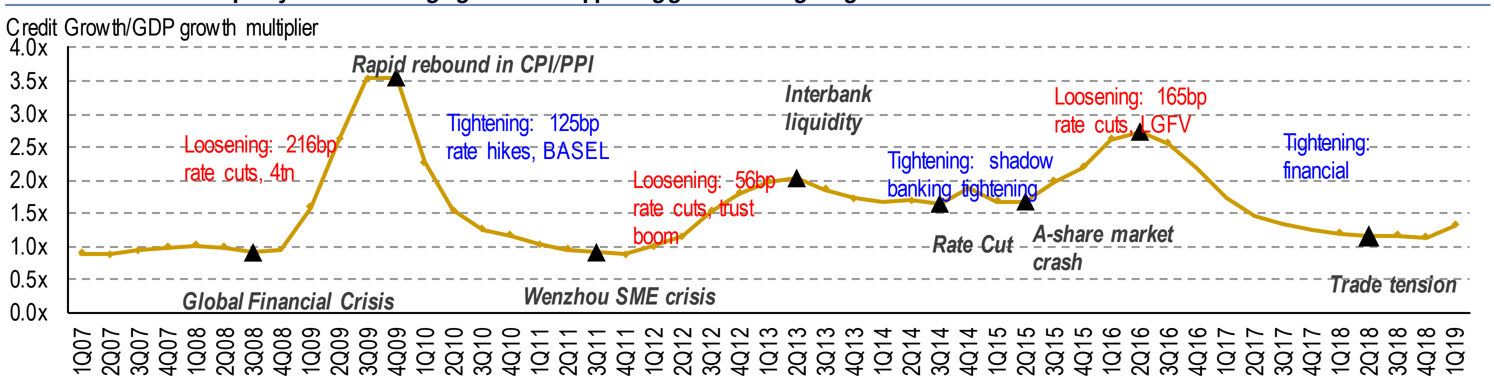
The reform of China's GREs has been on a long and yet-to-be accomplished journey since the late-1970s, from affiliates to China's previous planned economy to independent commercial entities. The government support has been weakening overall since defaults would be more common in a market economy. However, the current level of government support is still very strong generally, especially for the major international bond issuers in the GREs space. Comparing three categories, we believe FIs have the highest level of government support level due to their high systemic importance, as four banks in China have global systemic important financial institutions status and Basel III framework. The FIs also have official default records in the both China onshore and offshore markets; LGFVs are ranked after FIs due to their tightest linkage with the governments and also weakest fundamentals among the three categories. The official defaults happened in 2018 in the onshore market, and 2019 in the offshore market; SOEs overall have the lowest level of government support with many default cases of Central SOEs in 2015 and 2016 in China onshore bond market.

The three periods we focused on based on policy cycles

There are many ways to interpret the history of GREs, however, the policy cycle in China would be the key driver behind GRE reform. The most recent game-changing event would be the RMB4tn fiscal stimulus starting around 2009. We will start our review for the period after RMB4tn stimulus with two periods: (1) the leveraging-up period of all GREs driven by the great easing policy, and (2) current status to solve the debt problems with deleveraging efforts and new state-owned structure mainly in SOEs. A majority of recent changes have positive implications for current USD bond market. We will also summarize the history of GREs from 1950s to 2000s in the third part.

Some of the following charts/interpretations are from Asia Credit strategist Joyce Liang's primer on Chinese SOEs - IG: Chinese SOE bonds – A primer 10 September 2014, primer on China LGFV: China LGFV primer 15 August 2016 , and China bank equity analyst Winnie Wu's presentation: China banks in 2019: This stimulus will be difficult 02 May 2019.

Chart 34: China's macro policy has been swinging between supporting growth and fighting bubbles



Source: BofA Merrill Lynch Global Research, CEIC. From the PPT: China banks in 2019: This stimulus will be difficult by Winnie WU.

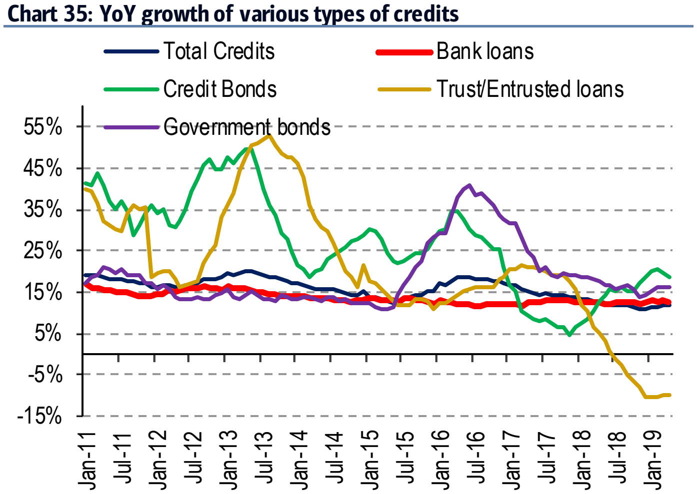
From RMB4tn stimulus to inflection point in ~2015

After the global financial crisis, China's economy was negatively impacted, with GDP growth slowing to 7.1% in 2008 from 12.4% to 13.9% in 2005-07. The export related sector was hurt the most with millions of redundancies in manufacturing sector. Mainly to help employment from a risk of further downturn, the central government made 10 measures to stimulate the economy with total fiscal spending estimated at RMB4tn based on Primer Wen's speech in 2009 in the World Economic Forum. The FIs were encouraged to boost the lending to SOEs, LGFVs, both directly via loan, or indirectly via shadow banking. Fueled by massive liquidity, SOEs and LGFVs generally adopted an aggressive expansionary strategy amid an easing environment as well.

For SOEs, the effectiveness of the RMB4tn stimulus started to fade in 2013. On top of the legacy issues, e.g., low efficiency, zombie SOEs. The repayment risks emerged in the SOEs sector first. The commodity price down-cycle in 2014 and 2015 further cracked down the financial strength of the SOEs in coal, iron & steel and manufacturing sectors. SOEs defaults, even for Central SOEs defaults, became common. Baoding Tianwei Group, controlled by one of China's biggest military contractors, China South Industries Group, was the first default central SOEs' affiliates in 2015. Other Central SOEs defaults that took place in 2015-16 include China Railway Materials Company Ltd., China National Erzhong Group Co., China National Coal Group, Sinosteel group, etc.

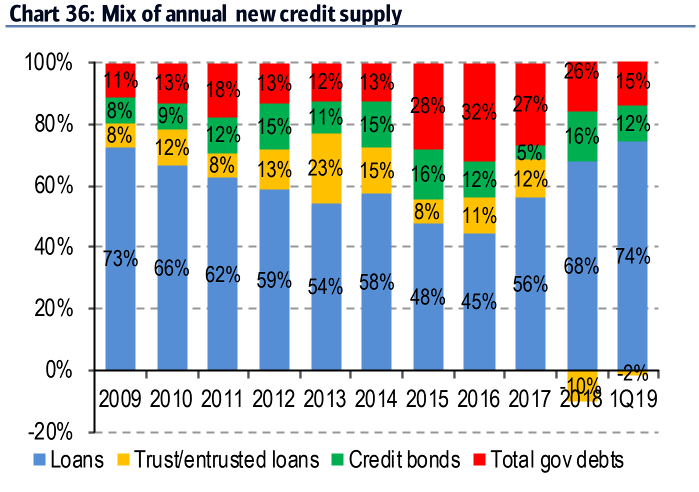
For FIs, the boom and bust cycle was behind SOEs given (1) more complicated accounting rules with risk-weights based nature, and (2) more importantly, the shadow banking activities provided a deeper pocket of banks. Many regulations, include those preparing for the Basel III implementation, were largely circumvented with the low capital charge and provision requirement of shadow banking. So the commercial banks could report financial metrics well above regulatory thresholds. That said, the NPL ratio still surged substantially in 2014 and 2015, especially for mid-cap banks.

Chart 35: YoY growth of various types of credits



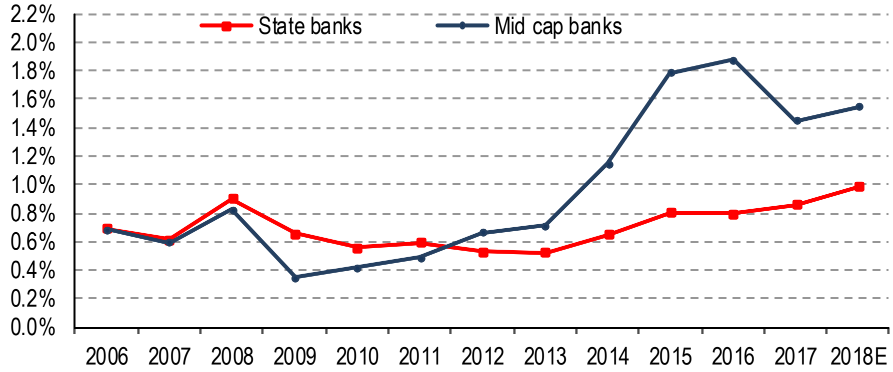
Source: BofA Merrill Lynch Global Research, CEIC. From the PPT: China banks in 2019: This stimulus will be difficult by Winnie WU.

Chart 36: Mix of annual new credit supply



Source: BofA Merrill Lynch Global Research, CEIC. From the PPT: China banks in 2019: This stimulus will be difficult by Winnie WU.

Chart 37: Credit costs of the H-share banks



Source: BofA Merrill Lynch Global Research, CEIC. From the PPT: China banks in 2019: This stimulus will be difficult by Winnie WU.

For LGFVs, the sector was officially defined in 2010 in Circular No.412 [2010], jointly issued by the MoF, NDRC, PBoC and CBRC. Many LGFVs were incorporated by the local governments, who wanted to take advantage of the great easing environment with more financing arms to deliver high GDP growth. The local governments inject capital, transfer land-use rights and/or other valuable assets, for instance roads, bridges and equity interests of some local SOEs, to the LGFVs when they are established. They can use the land or assets as collateral or future income from development of such land or operation of those assets as pledge to secure long-term loans from policy banks such as China Development Bank. After satisfying the initial capital requirement, they can seek more borrowings, for instance bank loans from commercial banks, trust financing and bond issuance in the domestic market to support their operation.

Current status: deleveraging/ controlling systemic risk

SOEs: deleveraging and new structure of State Capital Investment (SCI) entity

The late-cycle issues triggered certain rethinking and reform measures of central governments. Many new measures were rolled out. The central government announced a detailed reform plan for SOEs which is the foundation of SOEs' current status. The plan was further enhanced in 2015 with more explicate deleveraging target of 2ppt by 2020. Below, we discuss the more relevant initiatives of the SOEs, in our view, although a majority of the changes have been partially priced in with little near-term implications.

Deleveraging: 2ppt reduction of total debt to cap by 2020

In 2018, the State Council Issued the Guiding Opinions on Strengthening Asset-Liability Constraints on State-owned Enterprises. The deleveraging target is 2ppt reduction of total debt to cap by 2020. Actually, most of the SOEs have been on an aggressive deleveraging process since 2013, including the oil majors and BBB SOEs. However, many other policy initiatives have not shown their effectiveness since announced, including:

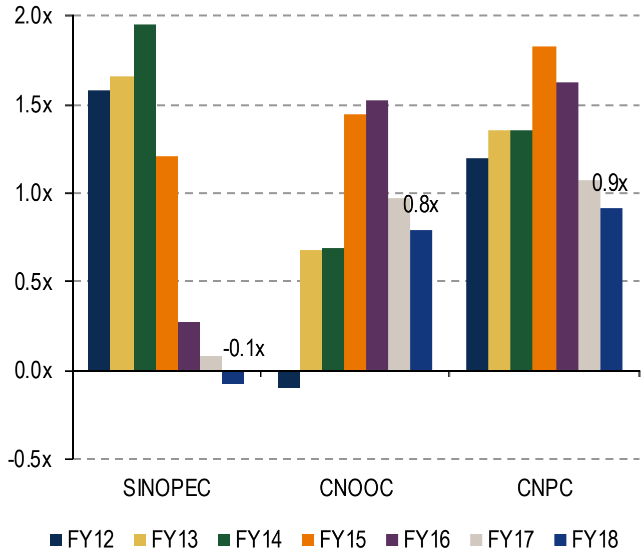
1. Issuing common equities was very difficult due to the dramatic volatility of domestic equity market in 2015. The main equity funding sources of SOEs, as well as FIs, were almost shut down in 2015 and 2016 due to 1x P/B rule.

2. Commercial banks' debt equity swap is generally difficult due to the high capital charge of the equity holdings in banks' book.

3. The preferred share issuance from the SOEs is difficult as well for the same reason without commercial banks as key investors.

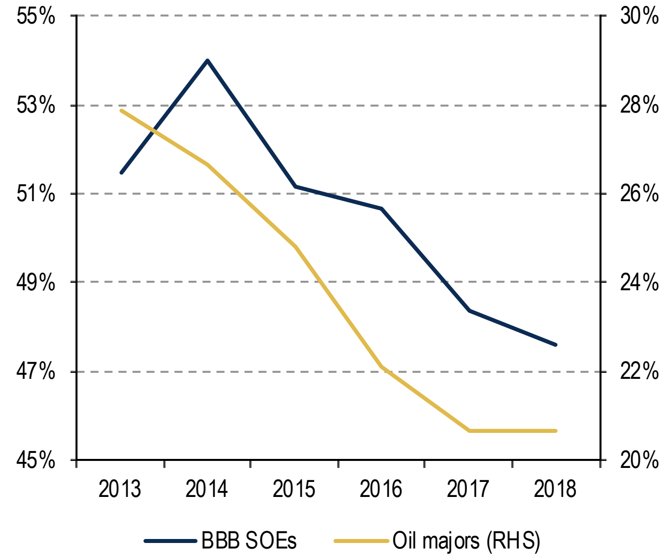
Other than organic deleveraging by paying down the debt, the ongoing efforts are still worth to watch and may have a positive effect: Mixed ownership, which means to encourage private sector participation through increasing ownership in SOEs; and to encourage senior perpetual bond issues in both onshore and offshore market for SOEs.

Exhibit 17: Oil majors reported net cash in FY18



Source: BofA Merrill Lynch Global Research. Company financials

Chart 38: The deleveraging of China SOEs (Debt/cap)



Source: BofA Merrill Lynch Global Research. Company financials

The new SCI model (state capital investment)

We have discussed under the section of Government support: Ownership of Central SOEs and SCI model

M&A: to reduce the numbers of Central SOEs

To achieve a better cost efficiency with less redundancy, the central government initiated a series of mergers between SOEs with similar mandates. The number of central SOEs decreased to 97 in 2019 from 113 in 2014. In the USD bond issuer space, the merger between ChemChina and SinoChem has been under the spotlight since 2017. As the reforms step into the deep-water zone as the central government named this stage, we do not expect major impactful M&A cases in 2019 and even 2020. M&A is also an important measure amid the supply sire Reform. Other than to stabilize the commodity price by reducing the production, a sector consolidation also helps to constrain the overall supply, as well as control redundancies.

FIs: a more advanced state-holding model, Huijin model

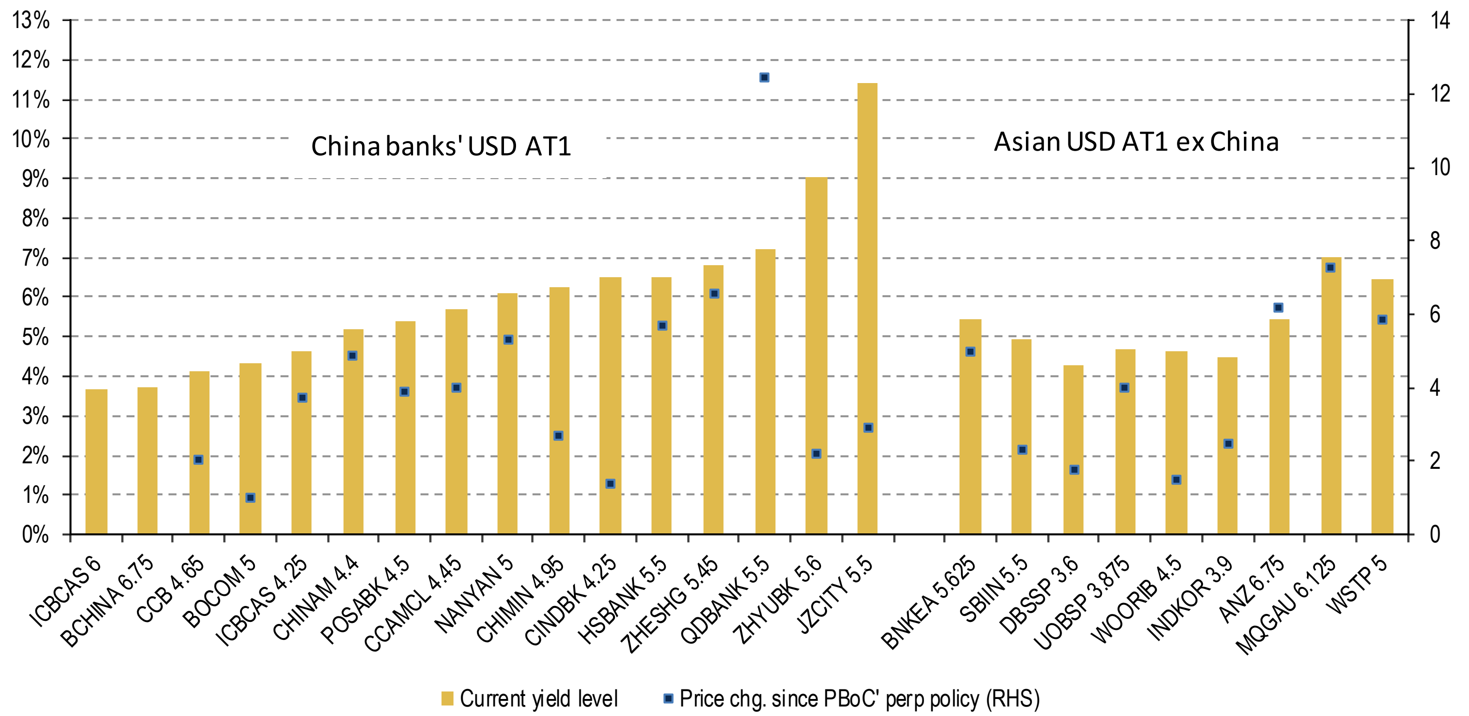
We have discussed the Huijin model in *The ownership of FIs – Huijin model*

Government support: cross-subscription of bank capital

In our view, the game-changing event in the banking sector would be perpetual bonds issuance policy, similar to the perp issuance in the SOEs space. On 25 January, BCHINA issued the first commercial bank perp in China onshore interbank market priced at 4.5% (3.9% or 130bp for G-spread in USD term). The total size is CNY40bn with 2x oversubscription from domestic commercial banks, insurers, securities and finance companies, etc.

The low funding cost and the technical support are due to the following: the night before BCHINA issued, the PBoC and CBIRC announced three positive measures to increase demand for bank perp in China onshore market: (1) allowing insurers to buy bank capital, including AT1 or tier-2 instruments; (2) including bank perps with ratings no lower than AA as qualified collateral for Medium-Term Lending Facility (MLF), Targeted Medium-term Lending Facility (TMLF), Short-Term Lending Facilities (SLF) and relending and (3) the eligible commercial banks could buy bank perp and swap it into the new instrument, Central Bank Bills Swap (CBS), with the PBoC. At end-December 2018, the PBoC also published a notice to rename preferred shares as perpetual bonds, which effectively indicated the CSRC's approval is no longer an obstacle to AT1 issuance in China onshore market. More importantly, the PBoC encourages commercial banks' asset management companies to invest into bank perpetual bonds, and even consider an over-the-counter selling on bank sub-debt to high-net-worth individuals (a pilot programme was mentioned by the senior officials working in the PBoC).

Chart 39: The dramatic market impact of PBoC policies on banks' perp issuance in Asian USD bond AT1 space



Source: BofA Merrill Lynch Global Research. From 23 JAN'19 to 15 May 2019 .

LGFVs: Cheaper funding expected in 2019

With heavy reliance on the local government support, LGFV evolution is the most complicated, with policies pointing to different directions. Generally, we believe most of the initiatives after end-2018's fine-tuning of financial tightening should be positive for the fundamental development of the sector. The key spirit of the reforms is about how to swap the debts of LGFVs from high-cost financial channels, most likely in the shadow banking part, to low-cost funding channels, e.g., domestic bond market, banks loans, or CDB policy lending as pilot programme.

According to local media reports, in 1H19, CDB provides low interest rate but long-term (e.g., 10-year) loans to help LGFVs roll over maturing debts and commercial loans. The regions confirmed are JIANG SU and HU NAN provinces, while SHANXI and HUBEI provinces are believed to be in the pipeline for such support. From a forward-looking perspective, this should help alleviate the SOEs' reliance on direct government funding and shadow banking to achieve their development targets.

The funding rules remain restrictive and onshore/offshore defaults did happen

Having said the policy is turning more supportive now, it still important to summarize the tightening policies announced in 1Q18, which is still standing now. To get formal funding from commercial banks is still difficult. That said, the financial soundness of LGFVs remains sensitive to domestic capital market and the extraordinary support from the government. In 2018 and 2019 we have seen defaults of LGFVs in both China onshore and offshore markets.

Table 8: Key credit events in LGFV sector in 2018 and 2019

Entity	Event	Related US$ bonds	Dollar Price	YTW	Key highlights
Qinghai Investment Group	First offshore (technical) default	QHINVG 7 ¼ 02/22/20	91.5	19%	The issuer did not paid for the coupon (USD 10.875 mn) on the pay day (22 FEB'19) but may wired the money on the following week. This could be perceived as the first China offshore LGFV default on coupon payment.
6th Division of SOAM	First onshore (technical) default		-	-	The issuer repaid the full amount on 15 AUG. after the due date of 13 AUG. The person allegedly involved in the technical default was punished for poor liquidity management.
Qinghai Investment Group	High repayment risk	QHINVG 6.3 9/26/18 Corp	-	-	QHINVG 6.3 9/26/2018 was believed to have repayment difficulty one week from the due date, but the issuers paid the full amount on time as a picture of remittance receipt shown in social media.
Tewoo Group Co Ltd	Offshore subsidiary defaults and sharp credit rating downgrade	TEWOOG 4 ½ 12/16/19 Corp	77	52%	After market felt complacent about HSINCG's US$ 300mn default, Tewoo senior bond surged back to 98. However, China onshore media reported Tewoo to seek debt extension for banks, and Fitch downgraded it to B- with negative watch from BBB-, 6 notches within 2 week in later April.
Tianjin Real Estate Group	Onshore trust loan repayment difficulty	TJREDM 4 ½ 09/29/20 Corp	90.5	0.113	The trust plan initiator CITIC Trust Co. announced issuer's repayment difficult in MAY'18. The issuer paid the full amount on time after the high public pressure.

Source: BofA Merrill Lynch Global Research;

GREs before global financial crisis

We will mainly focus on SOEs and FIs reform in the past, with SOEs being the bellwether. The market-oriented reform introduced in the past has seen the government loosening its control over SOEs, shedding a large number of loss-making enterprises, and significantly restructuring the rest, including public listed ones. The LGFVs sector was not very active in terms of capital impacts before 2010.

1950s-90s

Since 1950s, the initial form of GREs under a planned economy was almost the same as a government entity. The country's **SOEs** were mostly affiliated to, or directly run, by various government ministries and departments, and had little autonomy in making business decisions. The state was the sole owner of SOEs and entitled to 100% of SOE profits. The government agencies set annual output targets and collected revenues from and allocated funds to the SOEs, while the Chinese banks provided only a small amount of working capital loans. Since China initiated the open-door policy in the late-1970s, the government had tried several reform measures such as giving SOEs' management more autonomy in operation and incentivizing them through profit sharing.

Back to 1970s, **commercial banks** had replaced the government as the predominant source of funding for SOEs. Bank loans accounted for over 90% of SOEs' fixed-asset investments during 1985-95. This experiment proved to have failed in the mid-1990s with widespread operating inefficiency and mounting non-performing bank loans. A large number of large and medium-sized SOEs went into deep financial trouble, with two-thirds in fiscal deficit.

1997-2007

SOEs: aggressive deleveraging and a lesson on the importance of stability

The formal privatization of **SOEs** and FIs started since 1997, triggered by a weakening macro economy and China's entry into the World Trade Organisation (WTO). With the SOE sector in deep financial trouble and further threat of competition from foreign companies after China's entry into WTO, the central government undertook a radical reform program during this period, with measures including:

1. Separating SOEs' administrative functions from their business operations, which resulted in the disbandment or restructuring of a number of government ministries and departments;
2. A large-scale privatization program through policy-initiated bankruptcies and sell-offs of state assets to private firms;
3. Other policy aids like tax breaks, reduced interest payments and debt write-offs.

After the disbandment of many previous government ministries and departments, SASAC was set up as a special administrative unit directly subordinated to the State Council as the owner and supervisor of central SOEs. Local governments were also directed to establish special administrative units, local SASACs, to act as the owner and supervisor of local SOEs.

The aggressive deleveraging via bankruptcy and privatization led to a turnaround of China's SOEs, coincided by a painful memory of China economic history. During this period, 5,000 loss-making SOEs went bankrupt and nearly 10mn workers were laid off. By end-2000, the number of loss-making SOEs had dropped significantly and the state sector's profits had nearly tripled since 1997, the year before the reform. Meanwhile, the social turmoil in the region suffered the most from redundancy and taught government a lesson that social stability should be the last thing to be sacrificed. Some of the negative impacts are still difficult to be eliminated up until now. The implication has been holding up till the Supply Side Structural Reform in 2015, which had a policy bottom line of securing employment on best-effort basis.

FIs: good banks vs. bad banks, and the first bankruptcy of HDB

The late-1990s was a difficult time for commercial banks as well. The non-performing assets for large commercial banks could be 30-40% during the period, which led to the *bad banks* being incorporated in 1999. Meanwhile, the first and only official bankruptcy in China so far happened was that of Hainan Development Bank (HDB) in 1998. With the MoF's special government bonds, four AMCs have been helping the Big 5 and CDB to deal with asset quality problems since then. The financial sector's financial soundness has restored amid the bad asset disposals in early 2000s, and further improved significantly by the inflow of equity funding of Big 5 bank and China Cinda from 2005 to 2010.

IPO and government control

With better fundamentals, mainly great profitability of SOEs and improved asset quality for FIs, the IPO of GREs peaked around 2005-07, raising a total of US$128bn, including US$65bn from the A-share market and US$62bn from the H-share market. Meanwhile, during this period, a large number of SOEs spun off their core businesses as subsidiaries in the form of limited-liability companies and listed them on stock exchanges domestically or overseas, or both. The corporatized SOEs adopted modern corporate governance practices, including the establishment of boards of directors, oversight committees, and various internal control procedures.

While the scale of the privatization program was significant, the government did not pursue full privatization. It kept majority stakes in the large SOEs, as well as Big 5, (1) to reinforce its control over the economy rather than to weaken it, (2) to maintain social and political stability, and also because of (3) some constraining factors, such as the looming risk from the Asian financial crisis, an embryonic domestic capital market, and an undeveloped private sector, which together forced the government to rely on the large SOEs to drive economic growth.

Appendix

1. Administrative system in China

The administration framework in China is shaped by administration levels (admin-level). For government officials, there are eight degrees of admin-levels. While for the GREs as USD bond issuers, it is better to simplify the administrative system into a more straightforward framework:

1. Designation 1: The primary framework would only have two levels: Provincial and Sub-provincial. The National level is higher than both, but not important with no GREs in the level.

2. Designation 2: More specifically, we can divide sub-provincial into city and county level. Each level consists of a principle level and deputy/vice level, similar to President and Vice President in a country.

3. Designation 3: Then in theory we should have eight levels from Designation 2, which is too complicated for the GREs universe we discussed in this report. So we use the Designation 3 for USD bond issuers, with only five levels matter here: Principal provincial, Vice provincial, Principal City and Vice City, and the county level. For a majority of the cases, to distinguish vice provincial level vs. principle city level is the key for USD bond investment in FIs/SOEs. For LGFVs, it matters more city level vs county level.

Table 9: The designation we used for admin-level in this report

Designation 1	Designation 2	Designation 3	
National	National level, a.k.a. State Council level	No GRE	
Provincial	Provincial level, a.k.a. Ministerial level	**Principle Provincial**	Only 4 GREs: CIC, CDB, CITIC Group, China Railway Corp
		Vice Provincial	Big 5 banks, Top 4 insurers and c. 50 central SOEs,
Sub-provincial	City level, a.k.a. Prefecture level, Department or bureau level	**Principle City**	c. 40 central SOEs, local SOEs and LGFVs, most of the FIs in GREs space
		Vice City	local SOEs and LGFVs
	County level, a.k.a Section or Division level	**County level**	local SOEs and LGFVs with little international bond issuers, no point to differentiate within the level

Source: BofA Merrill Lynch Global Research;

Principal Provincial level

Being one grade lower than the state council level, principal provincial level is the highest level a GRE could fit in. Mainly based on reporting lines, there are only four GREs in this level: China Investment Corp (CIC), China Development Bank (CDB), CITIC Group and China Railway Corporation. Most of them do not issue dollar bonds directly but issue through subsidiaries. Those four GREs could directly report to State Council, but not their shareholding entities, e.g. Central SASAC or the MoF, because they are at the same level of those government entities. They also have a strong linkage with the government entities. For instance, China Railway Corporation was incorporated in 2013, transited from the Ministry of Railways. CIC's subsidiary Central Huijin Investment co. has been expected to be another SASAC in financial sector.

There are many government ministries in principal provincial level: the PBoC, CBIRC, CSRC, the NDRC as regulator; the MoF, Central SASAC, CIC as shareholder;

Vice Provincial level

For most USD bond issuers, Vice Provincial level is perceived to be the highest implied admin-level. By and large, any Party Chief in provincial level would be very powerful in terms of getting financial and policy support for the GREs under his/her management. In the FIs space, only the following sector leaders are in Vice Provincial level, Big 5 banks (Bank of China, ICBC, CCB, Agriculture Bank of China and Bank of Communications) and top 4 insurance companies (PICC Group, China Life, China Export and Credit Insurance Corporation, China Taiping Insurance Group Co.) In the SOE space, 48 SOEs being called as backbone are mostly implied as vice-provincial level SOEs.

The government entities in principal provincial level include: provincial SASAC, provincial MoF as local SOEs/LGFVs' shareholders; local development and reform commission and provincial branches of CBIRC and CSRC as regulator.

City level and below

The rest 49 Central SOEs are in Principal City level. Their Party Chief's implied admin-levels are below Provincial level. Similarly, other than the Big 5 banks and top insurers, a vast majority of the FIs who could issue USD bonds are in City level, although the admin-level does not matter too much for the FIs. For most central SOEs and large FIs, it is important to ask if the Party Chief is at provincial level or not, as provincial and city levels are very different in terms of the level of support.

In terms of LGFVs, Principal City level is the highest admin-level. As the highest level of a local government is Principal Provincial level, and its SASAC in Vice Provincial level will be the upper-level entity which owns/controls a provincial LGFV; thus the provincial LGFVs should be City level, one grade lower than Vice Provincial level. That is the reason why LGFVs are usually comparable with, or confused with, local SOEs but not Central SOEs. Based on the size and importance, some of the LGFVs/local SOEs are Principal City level, some are Vice City level or even County level, e.g., a LGFV of Economic Development Zone. Below City level, the support should be very weak and no need to differentiate the principal vs vice admin-level in the USD bond investment space, in our view.

2. CPC system

Party Chief and Communist Party of China (CPC) committee

The organizational form of CPC is known as Collective Leadership via different committees. In theory, the CPC committee members are equal and but only responsible for different aspects, mainly organization, propaganda and discipline inspection. That is the same setup for different levels of CPC committee in the SOEs, central/provincial governments and all kinds of related government agencies, at both entity level and base level. Based on local media, as of end-2017, China has about 90mn CPC members covered by millions of CPC branches and committees at different levels.

Given the internal democratic mechanism, there is no Chairman designation in CPC system, but only Secretary of the committee and the committee members of different functions. In practice, the Secretary of a CPC committee could usually lead all the committee members. Thus he/she is also named Party Chief. Compared with the Board of Directors format in corporate governance space, the Party Chief is like the Chairman but enjoys higher power. The committee member of discipline inspection is like the head of board of supervisors. As a matter of fact, many listed GREs' party committee has a similar setup vs. board of directors, with Party Chief always being the Chairman of the Board.

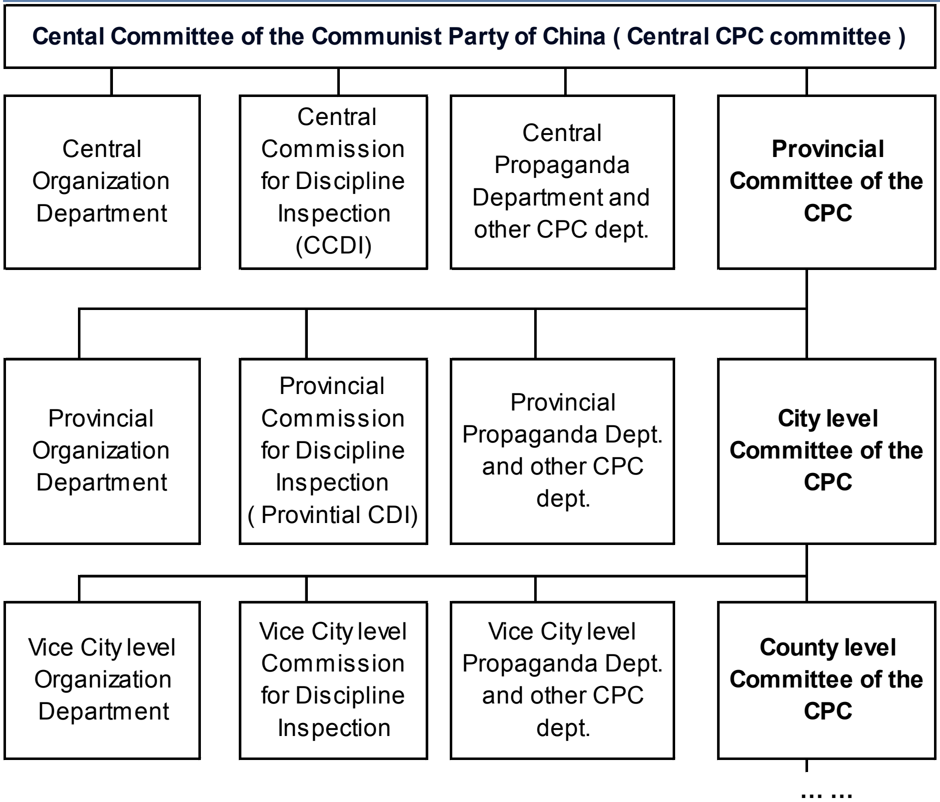
Two pillars of CPC system: personal appointment and discipline inspection

The root of the aforementioned admin-level is mainly backed by a full-scale CPC system. In our view, the admin-level indicates the level of government support, the systemic importance, and more importantly, the political power mindset of the senior management, mainly the Party Chef of a GRE. It is fair to say the admin-level is just the tip of the iceberg, while two pillars of CPC are:

1. **A highly centralized HR management system** across different sectors. The Organization Department of the CPC is the key authority for specific appointments. For GREs, as the government is the controlling shareholder, the ruling party could appoint senior management via the Organization Department based on its controlling position. For example, the Organization Department of the Central Committee of the CPC is the highest Organization Dept. With a principal of admin-level, it manages the senior ranking officials/management in FIs, SOEs, government entities and agencies, who are commonly known as centrally-managed cadre (中管干部). For GREs, centrally-managed cadre is a designation standing for high policy power and government support level for the entities evolved.

2. **A very restrictive discipline system with** Commission for Discipline Inspection (**CDI**) of PCP as the key authority. CCDI (Central CDI) is the highest authority who conducts daily monitoring and management over the senior management of Provincial-level GREs mainly. The main missions are CCDI, to enhance the internal control of an entity and fight corruption, via inspections on personal incomes, and other related affairs. CCDI could take the senior management away for investigation, a formal legal process may follow.

Exhibit 18: The basic setup of CPC organization



Source: BofA Merrill Lynch Global Research;

3. Foreclosure of Hainan Development Bank (HDB)

The following section is based on WEN TIEQUN, *Eight Crisis: Lessons from China, 1949-2009*, XIE PING, *Bank restructuring in China* , BIS website, https://www.bis.org/publ/plcy06c.pdf.

As the first and only public report foreclosure case in China's banking sector, the history of HDB is the only reference for a commercial bank's bankruptcy case.

HDB was founded on 8 December'94 with the registration capital of RMB1.67bn (USD250mn). The controlling shareholder was Hainan government, other 43 shareholders mostly were big SOEs, e.g., China North Industries Group, COSCO Shipping, etc. The bank's headquarters was in Haikou Hainan, and it was the only joint-equity commercial bank with independent legal entity in Hainan Province then.

In 1990s, Hainan province was one of the special economic zones with fast development of real estate sector. In the early years after incorporation, HDB reported high profitability with ROE of 90% with zero non- performing assets. However, as the housing bubble burst, many rural credit cooperatives in the province reported high non-performing loans (NPLs). Based on government guidance, almost all of the problematic rural credit cooperatives were merged into HDB. After the merger, the new HDB had a loan book of RMB4bn and liability of RMB5bn with substantial portion of NPL.

To enhance efficiency, HDB lowered the interest rate (IR) for deposit to 7% in early 1998, substantially lower than what those cooperatives offered earlier of around 20%. The interest gap led the depositors to withdraw their savings aggressively. HDB encountered liquidity problems and a bank run took place. The government injected RMB3.4bn liquidity and HDB raised the IR back to 18% again. However, the weak sentiment due to the housing market was still overwhelming.

Another trigger of the liquidity problem is the moral hazard. The bank's capital base was essentially very weak as the shareholders took away the capital injected into the bank away. The shareholders loan accounted for 87% of the total loans when the bank just incorporated. Some of the shareholders' low willingness to repay the loan transferred into a non-performing asset problem.

As a result, on 21 June'18m the PBoC announced the closure of HDB.

For **retail depositors**, ICBC took custody of HDB's liability and guaranteed the repayment of the principal and interests. None of the depositors suffered any losses. Actually, after ICBC stepped in, the bank run pressure was alleviated meaningfully. Most depositors transferred their fund to ICBC instead of withdrawing the money.

In terms of **institutional creditors**/depositors, which were likely to be the shareholders at the same time, the PBoC provided RMB4bn re-lending facility and registered the debts. However, there was no official bankruptcy process. The bank was just closed and became a legacy problem which may remain so for a long time. The other way to see it is that the liquidation still ongoing as there are still local authorities claimed to be in charge of the restricting process.

4. Central SOEs' defaults in China onshore bond market

Baoding Tianwei Baobian Electric Co Ltd and China South Industries Group Co

China South Industries Group Company is one of the leading military contractors of China-controlled Baoding Tianwei Group's subsidiary. Baoding Tianwei Baobian Electric Co Ltd was the first publicly listed SOE to default on its bonds in the year 2015. In April'15, the company defaulted on RMB85.5mn interest payment related to its RMB1.5bn MTN bond (11 天威 MTN2) having a coupon of 5.7% issued in 2011, due to severe liquidity crunch, huge loss in FY14, and no visible support from the group or the government. Consequently, the company filed for restructuring and eventually secured a bailout loan from a state-run bank. The investors started a civil litigation. The bond was earlier rated 'AA+' by a local rating agency, which was later downgraded to 'BB' prior to the default. According to media reports, the defaulting company was just 23% owned by the Baoding Tianwei Group, which could have led to disassociated relationship among ultimate parent and the subsidiary, in our view. The company also defaulted on its privately placed RMB1bn bonds in March'16. Baoding Tianwei was into power business, mainly manufacturing power equipment, an industry which seems to have overcapacity in China amid slowing demand.

China Railway Materials Company Ltd

Wholly owned by China Railway Material Group, the company was the first SOE to request a suspension of trading across bonds due to repayment problems in 2016. As of the trading suspension date (11 April'16), there were nine outstanding bond instruments that totaled RMB16.8bn, and the repayable period was between 17 May'16 and 18 Feb'19. In addition, the company had a similar amount of bank loans outstanding, making the total debt of RMB34bn problematic. On 17 May'16, the SCP was redeemed on time. Consequently, China Chengtong Holding Group took custody of China Railway Material Group, and China Railway Material Committee took the responsibility of debt restructuring, business integration and loss recovery, etc. In January'17, the company reached a restructuring deal with the creditors. As part of restructuring, the interest rates were reduced by 70% on defaulted on RMB10bn of privately placed bonds and RMB17.8bn of banks loans along with an option of converting debt-to-equity swap. The company was one of the largest steel products traders in China, procuring materials used in construction, operations and maintenance of railways. China Railways Material Company was caught in between substantial exposure to upstream steel products at the time of challenging economic situation in China in 2016. Ironically, the company reported decent financials in FY15, just before the trouble started to brew.

China National Erzhong Group Company and China Erzhong Heavy Industries

China National Erzhong Group Company was formally part of the backbone of China's industrial infrastructure with early beginnings in 1958. On 11 September'15, the company and its subsidiary China Erzhong Heavy Industries became the second SOE to default on outstanding bond as it was unable to pay the interest totaled RMB56.5mn of MTN (12 二重集 MTN1: principal RMB1bn) issued in 2012. Further, a RMB310mn enterprise bond issued in 2008 was also staring at default. These companies were owned by the larger China National Machinery Industry Corp (CNMI), the largest state-owned machinery company in China, which assumed the responsibility of the defaulting bonds. The defaulting companies were into making smelting equipment and their operations were very weak along with poor liquidity. Investors had dragged the company to court for repayment just before the scheduled payment due date. Nevertheless, the ultimate parent of these entities CNMI is a leading SOE under direct oversight of central government management. Hence, we believe the investors wanted to make sure the debt is taken care, before the occurrence of actual default.

Sinosteel Group

The company, a central SOE steelmaker, was in deep financial trouble from 2014 when the talk of restructuring of its debt started. It actually defaulted on RMB315mn interest payment in October'15 on its bonds (10 中钢债: principal RMB2bn). The company had a total debt of around RMB100bn at the time of default, which was later restructured by the lenders. Subsequently, the bond holders were asked not to exercise the put option and it postponed the payment until, 20 October'17, the company completed the payment on principal and interests. In December'16, the bank borrowing was restructured, involving a total amount of only RMB60bn that was divided into two parts, of which one part was kept with the existing creditors and the other part was made into a convertible debt, which in future could be exchanged for equity. According to Moody's, the steel and coal-mining companies were at the highest risk of default due to ongoing systemic restructuring in China to reduce the "overcapacity" industries.

5. LGFVs' defaults

Offshore default: Qinghai Provincial Investment Group (QHINVG)

Despite Qinghai Provincial Investment Group being a LGFV bond issuer, it did not pay the coupon of QHINVG 7 ¼ 02/22/20 Corp with US$300mn outstanding on 22 February'19, mostly seen as the first China offshore LGFV default.

The US$10.875mn (RMB72mn) funding shortfall for the coupon payment does not look substantial relative to QHINVG's financial strength. Based on 1H18 earnings report, the total asset was RMB64.4bn with cash on hand at RMB3.2bn. Total revenue and net profit of QHINVG in 1H18 was RMB9.2bn and RMB74.7mn, respectively. The company actively conducted asset disposals to repay the short-term debt with potential investors of larger SOEs, e.g., China's State Power Investment Corp, Aluminum Corp of China, according to local media reports. In 2018, QHINVG almost missed the principal payment of its US$300mn bond due on 26 September, but finally collected enough cash over the weekend before the due date. We cannot rule out the possibility QHINVG may get extraordinary support from other SOEs and LGFV for the coupon payment of this US$10.875mn again. The company is the largest aluminium producer in Qinghai province, and the majority owned by the provincial government. However, the company operates in an industry which faces overcapacity in China.

Onshore default: Xinjiang Production & Construction Corps (XPCC)

The 6th Division of State-Owned Asset Management Company (SOAM) in Xinjiang Production & Construction Corps (XPCC) failed to repay RMB500mn (about US$73mn) bonds in mainland China in August'18. However, it paid the full amount and issued a delayed payment notice on the exchanges. XPCC is both an economic and quasi-military organization founded in 1950. XPCC has a global brand name with perceived strong liquidity with investors assuming a guaranteed implicit support from the government. The company had RMB2bn worth of bonds maturity till March'19 when it defaulted on the bond. The XPCC unit was rated 'AA' by a local rating agency a month before the default. According to media reports, the company had only RMB87mn cash compared with a debt of RMB7.1bn when it defaulted. After the default, the chairman of the company was investigated due to the potential mismanagement of liquidity.

6. Central SOE list (Top 49 are backbone SOEs)

		Central SOEs in 2019	Central SOEs in 2014
1	**中国核工业集团有限公司**	**China National Nuclear Corporation**	**China National Nuclear Corporation** **China Nuclear Engineering Group Co.**
2	**中国航天科技集团有限公司**	China Aerospace Science and Technology Corporation	-
3	中国航天科工集团有限公司	China Aerospace Science and Industry Corporation	-
4	中国航空工业集团有限公司	Aviation Industry Corporation of China	-
5	中国船舶工业集团有限公司	China State Shipbuilding Corporation	-
6	中国船舶重工集团有限公司	China Shipbuilding Industry Corporation	-
7	中国兵器工业集团有限公司	China North Industries Group Corporation	-
8	中国兵器装备集团有限公司	China South Industries Group Corporation	-
9	中国电子科技集团有限公司	China Electronics Technology Group Corporation	-
10	中国石油天然气集团有限公司	China National Petroleum Corporation	-
11	中国石油化工集团有限公司	Sinopec Group	-
12	中国海洋石油集团有限公司	CNOOC	-
13	国家电网有限公司	State Grid Corporation of China	-
14	中国南方电网有限责任公司	China Southern Power Grid Co.,Ltd	-
15	中国华能集团有限公司	China Huaneng Group	-
16	中国大唐集团有限公司	China Datang Corporation	-
17	中国华电集团有限公司	China Huadian Corporation	-
18	国家能源投资集团有限责任公司	**China Energy Investment Corporation**	**China Guodian Corporation** **Shenhua Group Corporation Limited**
19	国家电力投资集团有限公司	**China Power Investment Corporation**	**China Power Investment Corporation** **State Nuclear Power Technology Corporation**
20	中国长江三峡集团有限公司	China Three Gorges Corporation	-
21	中国电信集团有限公司	China Telecom Group Corporation	-
22	中国联合网络通信集团有限公司	China United Network Communications Group Co.,Ltd	-
23	中国移动通信集团有限公司	China Mobile Communications Corporation	-
24	中国电子信息产业集团有限公司	China Electronics Corporation	-
25	中国第一汽车集团有限公司	China FAW Group Corporation	-
26	东风汽车集团有限公司	Dongfeng Motor Corporation	-
27	中国一重集团有限公司	China First Heavy Machinery Group Corporation	China First Heavy Machinery Group Corporation
28	**中国机械工业集团有限公司**	**China National Machinery Industry Corporation**	**China National Machinery Industry Corporation** **China Hi-Tech Group Corporation**
29	哈尔滨电气集团有限公司	Harbin Electric Corporation	-
30	中国东方电气集团有限公司	Dongfang Electric Corporation	-
31	鞍钢集团有限公司	Anshan Iron and Steel Group Corporation	-
32	**中国宝武钢铁集团有限公司**	**China Baowu Steel Group Corporation Limited**	**Baosteel Group Corporation** **Wuhan Iron and Steel (Group) Corp.**
33	中国铝业集团有限公司	Aluminum Corporation of China	Aluminum Corporation of China
34	中国远洋海运集团有限公司	China Ocean Shipping(Group) Company	China Ocean Shipping(Group) Company China Shipping (Group) Company
35	中国航空集团有限公司	China National Aviation Holding Company	-
36	中国东方航空集团有限公司	China Eastern Airlines Group	-
37	中国南方航空集团有限公司	China Southern Airlines Group	-
38	中国中化集团有限公司	Sinochem Group	-
39	**中国五矿集团有限公司**	**China Minmetals Corporation**	**China Minmetals Corporation** **China Metallurgical Group Corporation**
40	国家开发投资集团有限公司	State Development & Investment Corp.,Ltd.	-
41	中国通用技术（集团）控股有限责任公司	China General Technology (Group) Holding, Ltd. ("Genetec")	-
42	**中粮集团有限公司**	**COFCO**	**COFCO** **China Huafu Trade & Development Group Corp** **Chinatex Corporation**
43	**中国储备粮管理集团有限公司**	**China Grain Reserve Corporation ("Sino Grain")**	**China Grain Reserve Corporation ("Sino Grain")** **China National Cotton Reserves Corporation**
44	中国建筑集团有限公司	China State Construction Engineering Corporation	
45	**招商局集团有限公司**	**China Merchant Group**	**China Merchant Group** **SinoTrans & CSC Holdings Co., Ltd**
46	华润（集团）有限公司	China Resources (Holdings) Company Limited	-
47	**中国旅游集团有限公司[香港中旅（集团）有限公司]**	**China National Travel Service (HK) Group Corporation**	**China National Travel Service (HK) Group Corporation** **CITS Group Corporation**

		Central SOEs in 2019		Central SOEs in 2014
48	中国商用飞机有限责任公司	Commercial Aircraft Corporation of China (COMAC)		-
49	中 国 航 空 发 动 机 集 团 有 限 公 司	Aero Engine Corporation of China		new
50	中国节能环保集团有限公司	China Energy Conservation and Environmental Protection		-
51	中国国际工程咨询有限公司	China International Engineering Consulting Corporation		-
52	中国诚通控股集团有限公司	China Chengtong Holdings Group Ltd.		-
53	中国中煤能源集团有限公司	China National Coal Group Corp		-
54	中国煤炭科工集团有限公司	China Coal Technology & Engineering Group Corp		-
55	机械科学研究总院集团有限公司	China Academy of Machinery Science & Technology		-
56	中国中钢集团有限公司	Sinosteel Corporation		-
57	中国钢研科技集团有限公司	China Iron & Steel Research Institute Group		-
58	中国化工集团有限公司	China National Chemical Corporation		-
59	中国化学工程集团有限公司	China National Chemical Engineering Group Corporation		-
60	中国盐业集团有限公司	China National Salt Industry Corporation		-
61	中国有色矿业集团有限公司	China Nonferrous Metal Mining (Group) Co., Ltd.		-
62	中国国际技术智力合作有限公司	China International Intellectech Corporation		-
63	中国建筑科学研究院有限公司	China Academy of Building Research		-
64	中国铁路通信信号集团有限公司	China Railway Signal & Communication Corporation Limited		-
65	中国铁路工程集团有限公司	China Railway Group Limited		-
66	中国铁道建筑有限公司	China Railway Construction Corporation		-
67	中国交通建设集团有限公司	China Communications Construction Company (CCCC) Group		-
68	中国普天信息产业集团有限公司	China Potevio Company Ltd,		-
69	中国农业发展集团有限公司	China National Agricultural Development Group Co.,Ltd		-
70	中国中丝集团有限公司	China Silk Corporation		-
71	中国林业集团有限公司	China Forestry Group Corporation		-
72	中国医药集团有限公司	China National Pharmaceutical Group Corporation		-
73	**中国保利集团有限公司**	**China Poly Group Corporation**		**China Poly Group Corporation** **China SinoLight Corporation** **China National Arts & Crafts (Group) Corp**
74	中国冶金地质总局	China Metallurgical Geology Bureau		-
75	中国煤炭地质总局	China National Administration of Coal Geology		-
76	新兴际华集团有限公司	Xinxing Cathay International Group		-
77	中国民航信息集团有限公司	China TravelSky Holding Company		-
78	中国航空油料集团有限公司	China National Aviation Fuel		-
79	中国航空器材集团有限公司	China Aviation Supplies Holding Company		-
80	中国电力建设集团有限公司	Power Construction Corporation of China		-
81	中国能源建设集团有限公司	China Energy Engineering Group Co., Ltd		-
82	中国黄金集团有限公司	China National Gold Group Corporation		-
83	中国广核集团有限公司	China General Nuclear Power Group		-
84	中国华录集团有限公司	China Hualu Group Co., Ltd.		-
85	上海诺基亚贝尔股份有限公司	Shanghai Nokia-sbell Co., Ltd		-
86	华侨城集团有限公司	Overseas Chinese Town Enterprises Co		-
87	**南光（集团）有限公司[中国南光集团有限公司]**	**Nam Kwong (Group) Company Limited**		**Nam Kwong (Group) Company Limited** **Zhuhai Zhen Rong Company**
88	中国西电集团有限公司	China XD Group		-
89	中国铁路物资集团有限公司	China Railway Materials Company Limited		-
90	中国国新控股有限责任公司	China Reform Holdings Corporation Ltd.		-
91	**中国信息通信科技集团有限公司**	**China Information Communication Technologies Group**		**Datang Telecom Technology & Industry Group** **FiberHome Technologies Group**
92	**中国中车集团有限公司**	**CRRC Corporation Limited**		**CSR Corporation Limited** **China North Locomotive and Rolling Stock Industry (Group)**
93	**中国建材集团有限公司**	**China National Building Material Group Corporation**		**China National Building Material Group Corporation** **China National Materials Group Corp., Ltd.**
94	有研科技集团有限公司	General Research Institute for Nonferrous Metals		
95	北京矿冶科技集团有限公司	Serve the Mining Industries with Innovative Technologies		
96	中国建设科技有限公司	China Architecture Design & Research Group		
97	中国安能建设集团有限公司	China An'neng Architecture Group Corporation		

Source: BofA Merrill Lynch Global Research, SASAC, As of end-April 2019

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