

# China Local Investment and Development Companies Criteria

## Rating Criteria

### Scope of the Criteria

Lianhe Global applies the LIDC criteria to Chinese entities, that are 1) directly- or indirectly-owned, usually controlling, either through economic or voting control, by government(s) or government department(s) and 2) fulfil the definition of LIDCs. The criteria intend to cover most China LIDCs, but there are circumstances in which an LIDC may fall outside this scope. We believe these cases would be few and far between and we intend to use the same underlying principles to conduct our analysis on them.

The criteria do not represent a comprehensive coverage but only addresses key rating factors to form our credit opinions and will be reviewed periodically. Credit opinions tend to be forward-looking and include our views of issuers' future performance and development.

### General Approach

Lianhe Global applies a scorecard using a weighted-average approach to approximate an LIDC's standalone credit profile by assigning ratings in lowercase letters for each key credit factor ranging from the strongest 'aaa' to the weakest 'ccc and below' on a relative basis. The analytical components of the scorecard combine qualitative and quantitative measurements which in aggregate help form the overall standalone assessment. The scorecard is a summary that does not include every rating consideration. The weights shown for each factor in the scorecard represent an approximation of their relative importance for deriving the standalone creditworthiness, but actual importance may vary and is subject to analytical judgements. The weighted average result may be subject to modification after taking into account an LIDC's contingent liabilities or other idiosyncratic risks.

We then decide an LIDC's credit rating by applying notching approaches to capture the likelihood and degree of local government support.

### Overview

The criteria report explains Lianhe Global's general approach to assessing an LIDC's credit profile by combining the likelihood and degree of local government support that the LIDC will receive to sustain the LIDC's viability and sustainability, along with the standalone credit profile of the LIDC. We incorporate the availability of local government support into the assessment of an LIDC's standalone credit strength to assign a credit rating to the LIDC. The credit rating represents our opinion on the issuer's relative capability to meet its financial obligations (usually senior obligations) as they come due. It acts as an anchor from which all other issuer and issuance ratings for the issuer are derived and is comparable across various industries.

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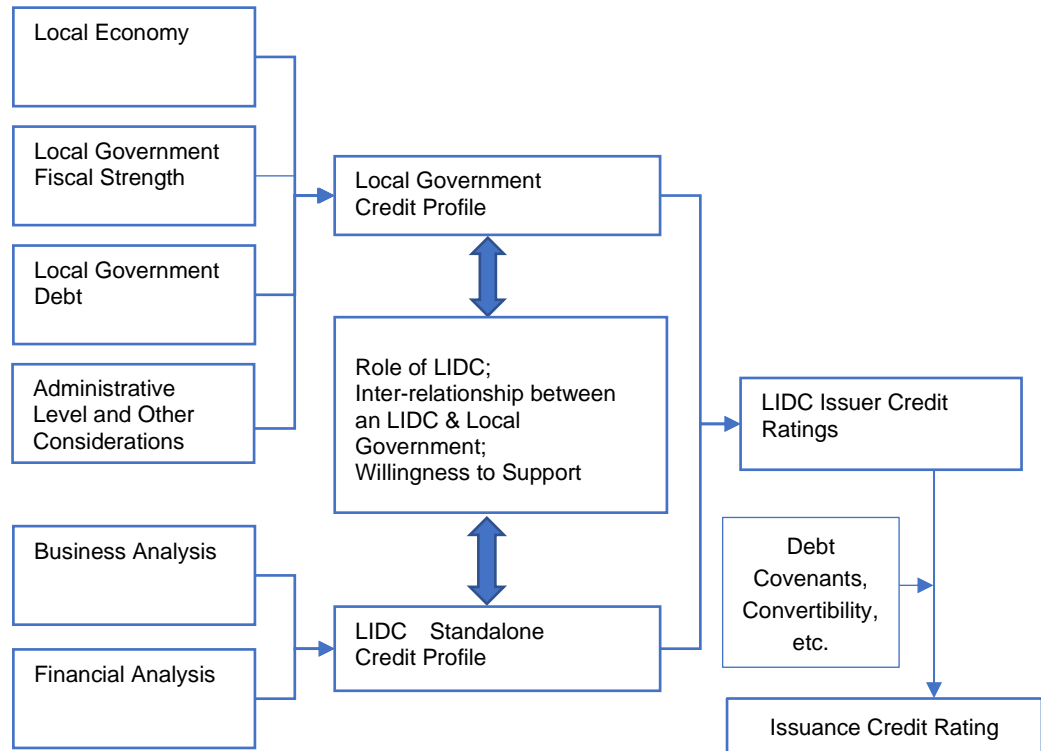
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The diagram below illustrates the topology of the criteria:



### Definition of LIDCs

An LIDC is an independent legal entity incorporated by a local government or other government department(s) with an initial capital investment in the form of financial contributions, land, and/or shares, etc. It functions primarily as a platform to facilitate various government development plans, such as the construction of infrastructure projects in cities and rural areas, land consolidation, shantytown renovation, and industrial parks. It may also execute a local government’s other economic and social development missions, such as job creation, tax revenue generation, promoting local industrial and tourism development, facilitating financing activities, and maintaining financial system stability.

More and more LIDCs have pursued market-oriented business activities with reduced involvement in public projects and less reliance on government subsidies. Having said that, LIDCs’ business development still usually follows the guidance of their respective local governments and is closely linked to their regional development plans. Lianhe Global focuses on the following conditions when examining whether an entity should fall under the “LIDC” category: (1) primary purposes are to provide public goods and services, carry out or fund various public policy missions or manage state assets as an extension of government functions, (2) rely on some sort of government support, in forms such as subsidies, funding or capital/asset injections for operation and debt servicing, (3) primary purposes are to provide commercial-related activities but are closely linked to regional development. Government would provide necessary financial support to ensure operation sustainability.

### Links to Multiple Governments

For LIDCs who are owned by more than one local government, we assess relationship between the LIDC and each of the local governments to determine the actual operational

and financial support provider(s). We may decide that, if there is no sufficient evidence of linkage to justify the use of a top-down approach, the bottom-up approach may be applied with the added benefit of external support and adjustments.

### Assessment of Local Government's Willingness to Support

Lianhe Global assesses a local government's willingness to provide support to its underlying LIDC primarily based on the analysis of four key factors: strategic importance, potential impact of default, ownership and control, and operational and financial support. Each of these factors is assessed and defined as "Very Strong", "Strong" or "Moderate to Weak" based on our judgements as per the guidance described in Exhibit 1 and then we decide the local government's willingness to support which are also defined as "Very Strong", "Strong" or "Moderate to Weak".

Among these four factors, we consider that strategic importance and potential impact of default would generally have a higher influence on a local government's willingness to support an LIDC than the other two factors. This reflects our view that a local government would have a strong incentive to avoid adverse consequences of the failure of an LIDC especially for the prevention of major disruption to the local economy and social stability as well as the borrowing capacity of the local government and other LIDCs.

In addition to these four factors, we may also examine whether there are any other elements that may affect a local government's willingness to support an LIDC, such as special favourable policy for an LIDC or the local government's public statement of support.

### Strategic Importance

We look at an LIDC's contribution to local social and economic development and the alignment of an LIDC's roles and business development vis-à-vis the strategic planning and development of an administrative level to review whether an LIDC has the common goals and objectives as the local government, and whether an LIDC is executing the plans under the guidance of the local government.

We examine the availability of other LIDCs of a similar administrative level in the locality as the probable replacements should an LIDC become failure. If an entity is the only LIDC in an administrative area, or the sole LIDC that performs a specific very important role, such as infrastructure construction, industrial development, public water and electricity, and state asset management, the possibility of receiving strong support from the local government will be high.

In addition, we may assess the magnitude and scale of contribution in terms of economic and financial indicators and general budgetary revenue (such as job creation, tax and government fund revenue) of an LIDC to the local government in an administrative area. We believe combining these quantitative factors together with our assessment of an LIDC's business will provide a better picture on the stance of an LIDC in an administrative area, which then demonstrates its importance to the local government, hence affecting the local government's willingness to support.

### Potential Impact of Default

A default on LIDC may endanger the continued provision of essential public services, management of state assets, and destroy investors' confidence in the local government, thus may lead to social instability and economic downturn and also significantly impair the borrowing capacity of the local government and other LIDCs within that area. In assessing

the potential impact, we analyse how the local government may perceive and weigh the various scenarios if an LIDC were to default, and the potential consequences to the local government and the local economy that may result from such default. If a default would pose devastating effects, the urge of the local government to prevent a default will be high, hence reflecting strong willingness of providing support to an LIDC to ensure its functionality and sustainability.

### **Ownership and Control**

We also factor in the LIDC's shareholding structure, local government's participation in appointment/removal of the board of directors and senior managers and funding plans into our assessment of the inter-relationship between LIDCs and local governments. We believe a local government could direct the operations of an LIDC through full control. A local government which plays an active role in managing an LIDC, including the decision on an LIDC's budgetary decisions, strategy, internal control and policy roles, instead of being a mere shareholder, will exhibit a higher likelihood of providing continuous support. We are also of the view that a local government is likely to allocate more resources and dedicate operational support through active management and control of an LIDC, which illustrates de facto "integration" into the core of a local government.

Besides the involvement of the local government in an LIDC's activities, this factor also assesses any responsibilities (deriving from the regulatory framework or legal status of an LIDC) on the part of the local government to provide support.

### **Operational and Financial Support**

We assess the operational support with reference to the control factor above. In particular, we look at the level of government purchases of services or goods, and reliance on specific sectors to derive revenue, as well as involvement of government officials in the day-to-day management and operations of an LIDC, which not only show support of the local government from but also its linkage with an LIDC from an operational perspective. We believe a majority government purchase of services and goods or support, speaks volumes about the inter-dependence between them.

On the financial front, we examine the regularity and stability of various forms of support to assist and maintain an LIDC's financial profile, such as through asset/capital injections, debt replacements, financial subsidies, tax benefits, and government purchases of services and goods. These are empirical measurements of local government's willingness to support the LIDC which we will make reference to, together with a demonstrated commitment or continuous support from the local government, when analysing the likelihood of support in the future. We also look at the amount and types of an LIDC's obligations guaranteed by the local government to derive the strength of financial support to the LIDC's business and operations.

## Exhibit 1

**Willingness to Support Analysis Framework**

	<b>Very Strong</b>	<b>Strong</b>	<b>Moderate to Weak</b>
Strategic Importance	Very important to local economy and social development and is very difficult to be replaced. Strong alignment with the local government's strategic planning. The only LIDC in the region or sole LIDC that performs a specific very important role. Carries out very important or broad government functions. Almost undertakes all public projects.	Important to local economy and social development and is difficult to be replaced. Strong alignment with the local government's strategic planning. The primary LIDC in the region. Carries out important or broad government functions. Undertakes major public projects.	Moderately or low important to local economy and social development and is easily replaced. Moderate or weak alignment with the local government's strategic planning. The second- or third-tier LIDC in the region. Mainly involved in commercial business. Public projects taken are immaterial.
Potential Impact of Default	A default would materially endanger the continued provision of essential public services/local economy and significantly impair the borrowing capacity of the local government and other LIDCs.	A default would temporarily endanger the continued provision of essential public services/local economy and moderately impair the borrowing capacity of the local government and other LIDCs.	A default would only pose moderate or minimal impact on the provision of public services/local economy or the borrowing capacity of the local government and other LIDCs.
Ownership and Control	Fully government-owned entity. The government has the ultimate right on the appointment/removal of the board of directors and senior management of the LIDC and close supervision over the LIDC's operations.	Majority government-owned entity. The government can materially influence the appointment/removal of the board of directors and senior management of the LIDC and its operations.	Government has minority ownership and limited involvement in the appointment/removal of the board of directors and senior management of the LIDC and its operations.
Operation and Financial Support	Proven track record of stable government support through asset/capital injections, debt replacement, subsidies, tax benefits, government purchases of services and goods, etc. and highly possible to continue.	Proven track record of less stable government support through asset/capital injections, debt replacement, subsidies, tax benefits, government purchases of services and goods, etc. and expected to continue.	Limited track record of government support or support may not be timely in case of needs.

## Local Government Credit Profile Analysis

The support ability of a local government to an LIDC within a jurisdiction is primarily based on the government's creditworthiness which is mainly underpinned by its fiscal and monetary fundamentals, and is usually associated with the performance of the local economy and its administrative level. The level of the local economic activity and development impacts the jurisdiction's GDP and GDP growth prospects and a local government's fiscal revenue. In general, the higher the level of a local government the subject entity is directly associated with, the stronger the expected level of support from the local government and hence the higher the creditworthiness of the subject entity.

### Local Economy

A large, resilient and diversified economic structure usually indicates stable and sustainable economic growth. This in turn would contribute to a steady increase in a local government's fiscal income with a broad revenue base, providing resources to support its underlying LIDCs. A small and narrow economic base often contributes to smaller tax revenue, lower GDP per capita, and slower and volatile GDP growth rate.

We assess the local economy primarily by looking at the size and composition of local GDP, the GDP growth rate and GDP per capita. In China, the agricultural (or primary) industry, in general, generates lower tax revenue while manufacturing (or secondary) and service (or tertiary) industries generate relatively higher tax revenue for a local government. As a result,

we favor an economy with high degrees of manufacturing and service industries. We also believe both manufacturing and service industries are likely to provide a more sustainable economic growth momentum.

We also examine a local government's geographic location and infrastructure, availability of and accessibility to natural resources, as well as human capital and demographics, as these are key factors for driving a region's future economic development and growth. Superior location or natural resources could provide advantages such as low transportation costs, low production costs, high productivity, attracting more human capital, etc. Ongoing inflows of population, especially young talent, and improvement of infrastructure would support a region's industrial upgrade and economic growth. These characteristics will be reflected accordingly in indicators such as fixed income investments and growth, output growth of qualified industries, urbanization rate and disposable income per capita.

At the same time, we recognize the important role of the central government's policies in a local economy. A local government following the directives of the central government could receive funding and subsidies and would be conducive to its economic development. Additionally, the competence of a local government official brigade in carrying tasks and prescribed policies is also a metric that we review.

### Local Government Fiscal Strength

A local government generally relies on three fiscal revenue sources: local tax revenue, government funding (primarily consists of land sale revenue), and transfer payments from central and/or higher-level governments. Lianhe Global examines fiscal revenue of a local government in terms of revenue structure, growth and stability, and primarily focuses on the fiscal revenue of the prior three years.

In general, tax revenue usually has greater stability and predictability than land sale revenue and transfer payments. We favor a diverse and broad tax revenue base. Reliance on and concentration in one industry sector for tax revenue may put a local government's finance at risk in case of an isolated economic shock. Strong land sales and persistent transfer payments would also support a local government's fiscal strength, although their sustainability would be less predictable and subject to changes in relevant policies, e.g. regulators' stance towards the property market, higher governments' subsidy policies, land transfer planning, etc. We also look into the flexibility of the transfer payments. Some transfer payments are earmarked for specific projects in which a local government cannot use or redirect these funds for other purposes.

Lianhe Global also examines a local government's fiscal expenditure in terms of its flexibility and scalability, as well as its pro forma budget deficit against revenue. A local government generally incurs two levels of expenditure: those in relation to general social welfare such as education, social insurance, housing and public services, and those in relation to projects such as earmarked infrastructure construction, etc. Sometimes a local government will also incur expenses in relation to transfer payments, such as those to local governments in administrative level above and/or below itself as means of capital re-organization and management of the economy.

We favor a higher degree of flexibility and scalability on fiscal expenditure which is conducive to debt service in times of financial difficulties. Some types of expenditure such as social welfare, public services, healthcare, education, etc are considered "necessary" which act as constraints to the flexibility on how a local government could manage its fiscal expenditure. Besides the individual considerations given to levels and trends within each of the revenue

and expenditures, we also look at the self-sufficiency rate of a local government's revenue versus expenditures to assess the fiscal strength of a local government.

### Local Government Debt

We examine the structure of a local government debt in the context of its debt ceiling, headroom, yield spread, debt and liability ratios. We look at the level of debt burden of a local government in proportion to its local economic strength, such as GDP size, as well as to its fiscal strength such as revenue size, to understand the leverage level and associated financial risks that a local government may face, and the financial flexibility that a local government may have in supporting the development of the economy and the operations of its LIDCs.

Currently, Chinese local governments are not allowed to issue debt above their debt ceilings. Conversely, these limitations would likely go to handicap the local governments' willingness and ability to support their LIDCs in times of financial distress.

### Administrative Level of Local Government

In general, the higher the level of a local government the subject entity is directly associated, the stronger the expected level of support from the local government and hence the higher the creditworthiness of the subject entity. In a case of an identical administrative level, we look into other economic metrics of local governments.

Additionally, the higher the administrative level of a local government, usually the better the fiscal condition of the government and therefore the stronger support ability the government may have. We factor in the administrative level of local governments when assessing its creditworthiness, with the higher the level the more positive notching impact there will be to the credit assessment of the local government.

China's administrative divisions under the Central Government are generally divided into four categories: provinces, autonomous regions, municipalities directly under the Central Government, and special administrative regions. Currently there are 23 provinces, 5 autonomous regions, 4 municipalities directly under the Central Government and 2 special administrative regions in China.

From an administrative perspective, there are numerous sub-level governments under each of these categories, and also branches of sub-sub-levels under some of the sub-level governments, i.e. "sub-provincial prefectural-level city" versus "regular prefectural-level city" within the "prefectural-level city" sub-level under the "provinces" category, which only adds to the complexity in understanding the whole system in China. However, from a credit perspective, we focus instead on the shareholding, fiscal and budgetary management perspective for each of these categories, in our analysis of the administrative level of local governments.

In general, higher level governments would strive to keep the creditworthiness of its sub-level governments in place, as the latter plays an important economic, political and social role in terms of proper function of these higher-level governments. However, as the levels go down further, we can notice a divergence of creditworthiness widening given the existence of a large number of local governments (hundreds and thousands of prefectural-level cities and county-level cities, respectively).

#### Highest and Second Highest Levels

In our analysis, we treat the capital city of China, Beijing as having the highest level. Provinces, autonomous regions, capital cities of these two categories, municipalities directly



under the Central Government, and cities specially designated in the state plan (“計畫單列市”) as the second highest level.

We consider capital cities as second highest level as they usually contribute a notable amount to the local economy of their respective provinces or autonomous regions. We also consider cities specially designated in the state plan as the same level, since their economic and fiscal aspects are directly linked to the Central Government, providing them with a similar economic and fiscal status as provinces.

### **Third, Fourth, and Fifth Highest Levels**

We treat prefectural-level cities as having the third highest level, while county-level cities as having the fourth highest level. For the rest of the local governments such as those township-level or villages, we generally consider them to have the lowest level in our analysis. As mentioned above, the creditworthiness of local governments of these three levels could diverge to a much larger extent.

### **Special Zones and Districts**

Other than the typical categories, there are also numerous special zones and districts in China, including national or provincial economic and technological development zones, high-tech industrial development zones, special economic zones, and new areas. Most of these zones are managed and controlled by administrative committees delegated by a provincial or city level government. Given the special and different purposes of the establishment of each of these zones, we generally assess them on a case-by-case basis.

### **Other Considerations**

We examine whether there are any other elements that may affect the creditworthiness of a local government by considering factors such as whether it has any special legal status, any records of credit or default events in the local economy, level of industry and sector concentration, level of implicit debts, utilization of bond issuance quota, etc.

### **Notching Approach – Top-Down or Bottom-Up**

We incorporate the likelihood and degree of local government support into an LIDC’s credit rating by using either a top-down or bottom-up notching approach. As a local government’s credit strength and its willingness to support affect the likely support for an LIDC, we use our internal credit assessment on a local government as an anchor and an LIDC’s credit rating would be notched down from the anchor if we apply a top-down approach for the LIDC. Exhibit 2 shows the typical notching we use based on our assessment of a local government’s willingness to support an LIDC. On the other hand, we use an LIDC’s standalone credit rating as an anchor and notch up from the rating to derive an LIDC’s credit rating when the bottom-up approach is applied.

The policy role and strategic importance of an LIDC for a local government and local economy and the inter-relationship between the LIDC and the local government, including but not limited to ownership and control, are main considerations when we decide which approach to adopt. In most cases, we choose the top-down approach for LIDCs have demonstrated strategic importance to the local government and the region’s economy, as the probability of receiving support from its associated local government is high. These LIDCs usually have advantages in various aspects such as accessing to major government projects and receiving large asset transfers from the government or other LIDCs and significant financial subsidies. Otherwise, the bottom-up approach would be adopted.



When there are several LIDCs operating under the same administrative government, we mainly look at each LIDC's contribution to the local economy, its business monopoly and functionality, and the impact of its failure to the region.

Lianhe Global may change the notching approach for an LIDC from the top-down to bottom-up, or vice versa, depending on the LIDC's business development and its relationship with the associated government. The top-down approach may become not applicable if there is perceived weakening in government support which could be due to reduced strategic importance of an LIDC with diminished government functions and/or a reduction of the state ownership. Conversely, a broader policy role or increased state shareholding could lead to a move from the bottom-up approach to top-down.

## Subsidiaries of an LIDC

Lianhe Global examines the creditworthiness of subsidiaries of an LIDC based on various observations, including but not limited to the linkage between an LIDC and its subsidiaries, the flow of government support among the local government, the LIDC and the subsidiaries, and business and operational performance of the subsidiaries. We look at whether the linkage of the subsidiaries exists, if any, at the LIDC or the local government level to decide if a top-down or bottom-up approach will be appropriate. If there is no notable evidence on how support from a local government can flow through to the subsidiaries, the anchor will be the standalone credit profile of the LIDC regardless of whether a top-down or bottom-up approach is adopted. If there is no existence of notable linkage, we would assess the standalone profile of the subsidiaries under the appropriate sector rating criteria instead.

### Exhibit 2

#### Typical Top-Down Notching from the Local Government's Internal Credit Assessment

	Local government's willingness to support		
	Very Strong	Strong	Moderate to Weak
Local government rated at 'AA' category or above	0-3 notches below	≥ 1 notch below	≥ 3 notches below
Local government rated between 'BBB' and 'A' categories	0-2 notches below	≥ 1 notch below	≥ 3 notches below
Local government rated at 'BB' category or below	0-1 notches below	≥ 1 notch below	≥ 2 notches below

## Potential Adverse Implications (Government Constraint)

In most cases, an LIDC's credit rating would be constrained by its government's credit profile, even though the LIDC's standalone rating is above the government's credit rating. If there are specific ring-fencing arrangements such as shareholders agreements or debt covenants, whereby the local government, even though as a controlling shareholder, will have limited ability to access/mobilize the assets or cash of the LIDC, the cap of an LIDC's credit rating to its government's credit profile may be lifted.

## LIDC Standalone Credit Profile Analysis

### Business Analysis

LIDCs' business activities and revenue profiles have been increasingly diversified following the economic development and urbanization of the regions in which they operate. We

generally analyze LIDCs' business profile through the sub-factors mentioned below with an aim to assess their strategic importance to the local economy as part of our assessment of local government's willingness to support. As the primary role of LIDCs is to execute the initiatives of local government, this analytical approach hence dissects how the nature of various businesses would affect the credit profile of the LIDCs.

LIDCs often operate as not-only-for-profit. Oftentimes, these LIDCs engage in primary land development and development of infrastructure projects with large initial outlay, long construction and pay-back periods etc, according to the strategic planning and implementation of the local government. Also, some LIDCs engage in the management of state assets with an aim to control risks in the economy and financial system of a local government. As a result, the application of an additional set of metrics such as nature of the business, development trends, scope and mode of operation, source of funding, efficiency of operating and asset management, project construction phase/cycle, method and stage of payment, and project under planning etc will be more appropriate in conducting business analysis of LIDCs.

For LIDCs who carry out meaningful commercial activities, we also assess their business profile by looking at the sub-factors below from a more commercial perspective and reflect the observations accordingly into the business analysis section of the scorecard.

### **Macroeconomy and Operating**

We assess the macroeconomy and operating environment in which the LIDCs operate in conjunction with our Local Government Credit Profile Analysis (as abovementioned) to derive the macroeconomic profile. We believe macroeconomy sets the tone on how and what an LIDC performs, in particular to conducting business activities in various sectors within the local economy.

### **Business Profile and Risk**

We usually consider the business nature, role and functionality, and development trends etc. when we examine an LIDC.

For an LIDC that provides public goods and services, we consider the efficiency in performing its functions and the accrued benefits provided to the public. We look at the business flow and how different elements of the operations piece together for the LIDC to effectively carry out its business to be in line with expectations of the local government. We also consider, on the repayment front, the terms, size and timing of government subsidies and/or funding in order for the LIDC to sustain its business.

For an LIDC that provides quasi-public services, we consider both accrued benefits to the public and the commercial aspects, such as stability and industry dynamics, which affect how much government aid would be required. For the sake of discussion, we consider regulated utilities as quasi-public services. Frequently regulated utilities are also regulated monopolies with government oversight. These regulated utilities perform public services while they charge a market price to maintain their level of services with any shortfall filled by government subsidies or funding.

For an LIDC that engages partially in commercial activities, we also exam the rationale behind the involvement in these activities, their business and financial performance, and how those will affect the performance of the LIDC as a whole.

### Mega Projects Under Construction and Planning

We pay close attention to any mega or white elephant projects undertaken by an LIDC, that require a large initial outlay, long construction and pay-back periods, which often run into construction delays and budget overruns. We believe any mishap in a mega project could easily risk and ruin the viability and liquidity of an LIDC. We take into consideration mega projects that are both under construction and under planning. We examine closely a mega project's initial outlay, total layout, source of funding, construction periods, stage of construction, budget shortfall, balance of budget, and pay-back period etc.

### **Management**

Lianhe Global pays close attention to the experience and background of senior management of an LIDC. We generally examine an LIDC's organizational structure, reporting hierarchy, delineation of duties, internal control processes, and overall corporate culture. We may also examine senior management and board members' tenures, as well as their past official titles and any roles within government bodies and current political party affiliations. We believe, given the close linkage between LIDCs and their related local governments, this is a critical assessment factor. If a current board member of an LIDC has had previously held positions within government bodies and/or currently has political party affiliation, this at least gives the appearance of the important role of the LIDC to a local government, as well as the close ties between them. Additionally, we believe this close linkage is also conducive for an LIDC to seek more government resources or funding. We favor senior managers and board members with prior tenures at government bodies and/or have current political party affiliations with state-owned enterprises ("SOEs").

### **Financial Analysis**

#### **Asset Quality and Balance Sheet Structure**

##### (1) Asset Quality

Lianhe Global first generally examines an LIDC's asset composition and purpose, as well as their prevailing market values for the prior 3 years. We examine an LIDC's asset composition such as (but not limited to) account receivables, other receivables, inventory, PP&E, long-term investments and intangibles, as well as their corresponding purposes such as receivables related to current accounts with local government(s) and/or other entities, assets earmarked for public services, quasi-public services, and commercial purposes. We also examine if there are any restrictions on asset sales, and/or any potential asset injection plans from local government.

We pay close attention to an LIDC's receivables and land reserves. An LIDC with sizeable account receivables and other receivables (particularly those that are current account receivables) may pose risks to its liquidity position. We examine its receivables exposure to key clients in this regard, including terms, aging and settlement trends. On the land reserves front, we examine the valuation of land prices. Oftentimes, land prices are volatile in some regions of China. Many of them are challenging to evaluate and develop, which may result in overstating their carrying values inadvertently. This may affect an LIDC's asset size and quality, consequently. Additionally, we may examine the development costs, carrying values and sources/uses of funds of projects under construction with reference to their corresponding initial outlay and staged deployment of payments.

We also pay close attention to financial assets and long-term investments of an LIDC, as these reflect on utilization of funding and the effectiveness of deploying its capital towards

investments. These indicators will be of even more importance for LIDCs who play a role in management of state assets for the local governments and economy.

#### (2) Equity

Secondly, we examine an LIDC's shareholder composition, their changes over time (or stability), as well as past and planned equity injection plans. We believe shareholders are the biggest supporters of an LIDC and they map its development direction with committed capital.

#### (3) Debt Structure and Trend

Thirdly, we examine an LIDC's debt structure and trends. An LIDC's debt includes short-term and long-term borrowings, bonds payable, bills payable and other financial obligations. We usually examine an LIDC's debt structure in terms of bondholders, size and currency, tenor, yield spreads, maturity profile and financial guarantee, if any, for the most recent 3 years. We pay particular attention to the trend, composition and cost of funding of various debt types within the debt structure and their appropriateness in relation to the asset structure and business profile. We also examine methods of payment for the debt and their corresponding repayment plans in the next 3 years.

#### (4) Debt Level and Trend

Fourthly, we examine an LIDC's level of debt and trends for the most recent 3 years. In particular, we examine an LIDC's leverage in terms of debt to equity, debt to capitalization, and long-term debt to capitalization ratios, as well as their respective trends.

#### (5) Contingent Liabilities

We believe a majority of the contingent liabilities stem from guarantees on third parties' (or related parties') financial obligations. In case of a non-payment, an LIDC in its capacity as a guarantor has to honour the financial obligations. Lianhe Global usually examines the commercial terms of these guarantees and their associated liens and claims against on the third party (or the related party) for its own benefits in case of a default. This is commonly known as a counter-guarantee clause in China. We may also examine the business nature, guaranteed amount, duration, concentration risk, operating and financial strength of the third party, historical losses incurred from guarantee liabilities if any, and include these contingent liabilities under an LIDC's debt profile for our analysis in its repayment capacity.

### **Profitability and Liquidity**

#### (1) Revenue and Cost Structure

Lianhe Global reviews an LIDC's most recent 3 years of financial statements. We review an LIDC's revenue and cost structure, as well as their stability and developing trends. In particular, we examine an LIDC's size of revenues, operating profits, and its gross margin, as well as the respective trends of these metrics.

Given LIDCs' nature of the business and their close ties to local governments, it is not surprising that some LIDCs may depend primarily and continuously on government subsidies and/or funding to stay operational. In these cases, Lianhe Global pays close attention to the stability of government subsidies and/or funding, as well as monitoring LIDCs' changing roles and dominance under prevailing policy stances.

#### (2) Liquidity

We look closely into an LIDC's receivables and current assets. Oftentimes receivables could make up a significant amount of an LIDC's current assets. We look at the proportion of receivables to total assets and ratio of current assets versus short-term debt to derive debt

coverage prospects. We also assess an LIDC's collection rate by paying close attention to the historical 3-year average cash amount received comparing to the historical 3-year average revenue. In addition, we look at the proportion of restricted assets to total assets, in order to gauge how much flexibility an LIDC has in terms of mobilizing its assets.

We examine an LIDC's statements of cash flow with particular attention to its cash flow from operating activities and investing activities. We believe a strong and steady cash flow from operating activities is one of the best conditions for debt servicing. Cashflow from investing activities shows an LIDC's risk management approach and investment philosophy. We pay particular attention to sales categorized under operating activities and investing activities. In some cases, sales would be recognized as investing activities which should have been recognized under operating activities. We make adjustments accordingly.

We also examine an LIDC's statements of cash flow from financing activities to understand its financing needs both in terms of debt service and new issuance to form a holistic picture of its financial and repayment burdens.

### Repayment Capacity

We examine an LIDC's short-term repayment capacity in terms of cash to short-term debt, debt to CFO and CFO to interest ratios, and long-term repayment capacity in terms of EBITDA over interest and debt over EBITDA ratios for the most recent 3 years. As stated earlier, we pay close attention to contingent liabilities of an LIDC, especially third-party guarantees. Besides the factors mentioned, we also look at the ratio between the number of third-party guarantees and total equity. In general, we examine all these ratios' past stability as we would under our general corporate criteria.

### Availability of Credit Facilities

We usually review an LIDC's most recent 3 years of bank credit facilities in terms of the number and types of credit lines, terms, limits, utilized and unused portions. We may also review the type of banks which are providing credit facilities, such as policy banks, nationally recognized commercial banks and/or regional banks. We may also review if any credit line has been renewed, declined, or terminated and/or any maturing bank loan has been repaid or rolled over, in the past 3 years. We believe the availability of large and multiple bank credit lines are conducive for an LIDC to maintain its liquidity position.

## Summary of Key Rating Factors

	<b>Key Factors</b>	<b>Key Sub-factors / Indicators</b>
<b>Local Government's Willingness to Support</b>	Strategic Importance	Nature of local LIDCs etc.
	Potential Impact of Default	
	Ownership and Control	Shareholders and controlling
	Operational and Financial Support	Stakeholders' track record on capital injections, allocation of resources/assets, providing operational support and receiving govt subsidies /funding, as well as their expected continuity
<b>Local Government Credit Profile</b>	Local Economy	Size, growth and structure of GDP, GDP per capita, number and change of population,



		natural resources, economic outlook etc.
	Local Government Fiscal Strength	
	Local Government Debt	Outstanding debt and government debt ratios (government debt to aggregate revenue and GDP)
	Administrative Level of Local Government	
	Other Considerations	
<b>LIDC Standalone Credit Profile</b>	Macroeconomy	
	Business Profile and Risk	
	Management Quality	
	Asset Quality	
	Capital Structure	
	Profitability	
	Liquidity	
	Debt Servicing Capability	

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