China Premium Database Regional Data Expansion Highlights - Aug 2022

China's population development has undergone significant changes in recent years. With the economic development and demographic structure transition, the population natural growth rate has slowed down, the fertility level has continued to decline, and the aging degree has deepened.

Meanwhile, the "aging and low birth-rate" with negative population growth will have a profound impact on the real estate supply and demand, and has inspired a series of research such as

- How to analyse the imbalance of regional population and economic development under demographic transition? How will aging affect the economy and real estate industry? How to interpret the changes in fertility policy and its background? **(long-term study)**
- Why is there a downward trend in the commodity housing transaction recently? What are the reasons for the volatility in commercial and residential rental prices? **(short-term hotspot)**

To facilitate clients in analysing related issues in a more comprehensive and in-depth manner, China Premium Database has added **regional real estate and macro data** in August:

- **Real Estate:**
  - **Property Transaction & Supply** (commodity building, secondary market) by city/county level daily / monthly / quarterly / annual data
  - **Property Price** (residential, secondary market, rental, land transferred, construction and installation) monthly / quarterly / semi-annual city level data
  - **Top Real Estate Developer** land acquisition and commodity building sold monthly data
- **Macro:**
  - **Social-demographic** (dependency ratio, natural growth rate, life expectancy, social security) annual data by province & city
  - **Foreign Trade** monthly data by 31 provinces and 240 countries

May – June	July	August – September	October	November	December
Regional Depth Enhancement	High Frequency Alternative Data	Regional Depth Enhancement	High Frequency Alternative Data	International Trade Data	Industry Data

1. Enhancement Scope

(1) Regional Real Estate

Sections	Indicators	#Series	CDMNext Link	Geo / Company	Historical Data	Frequency
Property Transaction & Supply	**1. Commodity Building Transaction & Supply with building sold / floor space sold / property price / avg price per set etc.:** 1) (Residential) daily city level data	7,200+	Data Link	60+ cities、240+ districts & counties	Jan 2016	Daily, monthly, quarterly, annually

		#Series	CDMNext Link	Geo	Historical Data	Frequency
	2) (Residential, Commercial Building, Office Building) weekly & monthly & quarterly & annual city level data 3) (Residential) monthly & quarterly & annual district & county level data **2. Secondary Market (Residential) with building sold / floor space sold / property price / avg price per set etc.:** 1) Daily & weekly & monthly & quarterly & annual city level data 2) Monthly & quarterly & annual district & county level data					
Property Price	**1. Property Price (high, low, median) monthly data:** 1) Common Commodity Residential (1st, 2nd, 3rd class area) 2) Deluxe Commodity Residential, Office Building, Commercial Building **2. Secondary market residential average price monthly data** **3. Property Rental Price (high, low, median) monthly data:** 1) Residential (1st, 2nd, 3rd class area) 2) Low / Public Rental Housing, Office Building, Commercial Building **4. Land Transferred Price (high, low, median) quarterly data:** Residential, Commercial, Industrial **5. Construction and Installation Cost semiannual data**	1,800+	Data Link	30+ cities	Jan 2017	Monthly, quarterly, semi-annually
Main Real Estate Developer	1) Land Acquisition (Residential, Commercial & Office, Industrial & Storage) data 2) Commodity Building Sold (ytd) data	2,500+	Data Link	100+ companies	Jan 2017	Monthly
Total		11,700+				

* Historical data subject to data availability

*Commodity building: the house developed, constructed, and sold or leased by real estate development enterprises. According to the use purpose, commercial houses include commercial residential houses, houses for business use, office buildings, and other houses

(2) Regional Macro Data

Topics	Sections	Indicators	#Series	CDMNext Link	Geo	Historical Data	Frequency
Social-Demographic	Population: Dependency Ratio, Natural	1) Dependency Ratio: Gross / Children / Elderly Dependency Ratio 2) Natural Growth Rate	220+	Data Link	Nation, 31 Provinces	1949	Annually

	Growth Rate, Life Expectancy	3) Life Expectancy (Male / Female)					
	Social Security by province	1) Medical Insured Person 2) Unemployment Insured Person & No of People Receiving Benefit 3) Injury Insured Person & No of People Receiving Benefit 4) Fertility Insured Person & No of People Receiving Benefit	350+	Data Link	Nation, 31 Provinces	1989	Annually
	Social Security by prefecture level city	**Insured Person:** 1) Pension (Staff, District under City Staff, Resident) 2) Medical (Staff, District under City Staff, Resident) 3) Unemployment (District under City) 4) Injury 5) Fertility	2,600+	Data Link	290+ cities	2002	Annually
International Trade	Foreign Trade data by Country & Provinces	USD & RMB import & export values	26,900+	Data Link	31 Provinces x 240 Countries	Jan 2017	Monthly
Total			30,100+				

* Historical data subject to data availability

2. Use Cases

2.1 Natural growth rate is a useful tool in analyzing fertility policy changes background & impact

Natural growth rate of population refers to the ratio of natural increase in population (number of births - number of deaths) to the average population per year, this indicator can be used to study fertility policy changes background & impact. In below charts:

- Since one-child policy became constitutional in 1982, the natural growth rate has steadily declined for 20+ years (the slight increase in the late 1980s was due to the fact that people born in the 1960s reached child-bearing age);
- After two-child policy was fully liberalised in 2015, the natural growth rate increased within 2 years, and the total number of people receiving fertility insurance benefit YoY exceeded 40% in 2016;
- Before China introduced three-child policy in 2021, the natural growth rates of 31 provinces in 2020 were lower than that in 2019, and some provinces (such as Liaoning, Heilongjiang, Sichuan) had negative growth rates.

Natural Growth Rate

| | 3Y | 5Y | 10Y | All | 1949 — No end date 📅 |

Great Chinese Famine

One-child policy became constitutional

Two-child policy was fully liberalized

Three-child policy was introduced

3.00

2.00

%

1.00

0.00

-1.00

1949   1967   1985   2003   2021

1960   1980   2000   2020

■ **Population: Natural Growth Rate** ‹ ›
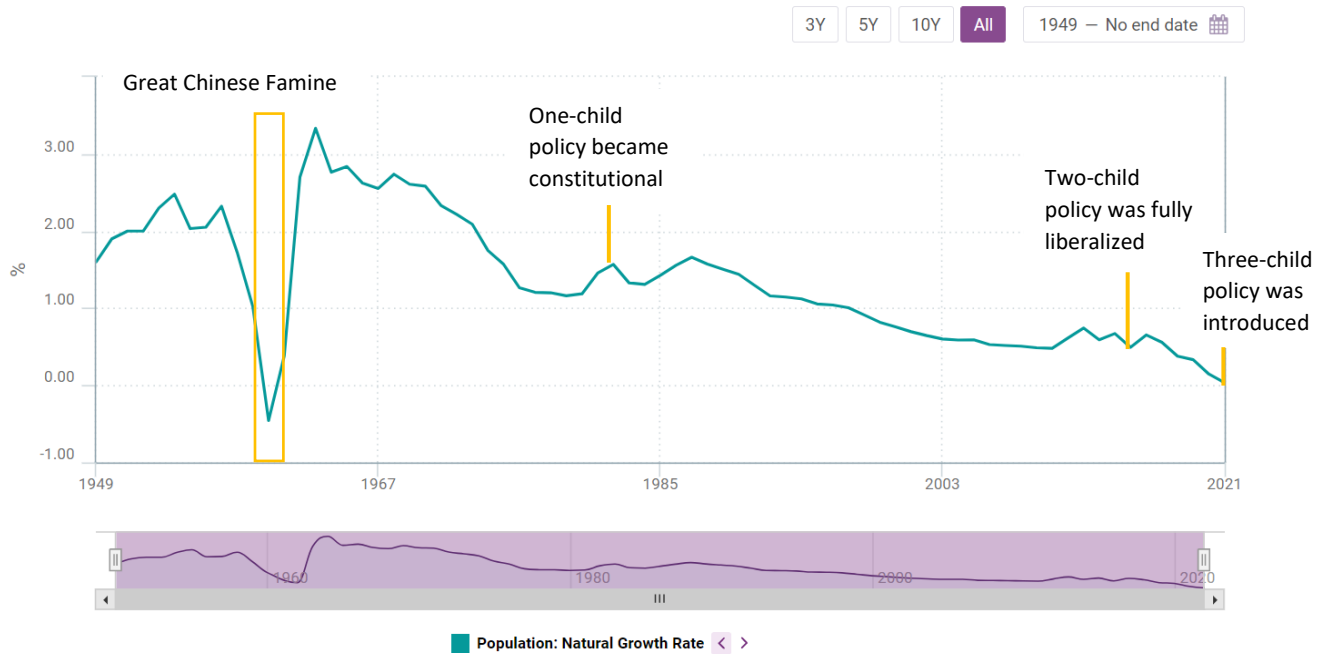
CN: Social Security Fund: Fertility: No of Beneficiary

2 years after two-child policy was fully liberalized

| | 3Y | **5Y** | 10Y | All | 2015 — No end date 📅 |

	2015	2016	2017	2018	2019	2020
Beijing; %CHANGE(Over ...	-0.79	-1.70	32.14	-10.41	-0.42	-12.90
Tianjin; %CHANGE(Over ...	-12.75	45.07	-2.35	-8.75	-2.32	-10.14
Hebei; %CHANGE(Over ...	-17.82	83.14	7.40	-13.36	12.98	-9.29
Shanxi; %CHANGE(Over ...	8.14	11.54	59.96	-0.28	10.93	2.35
Inner Mongolia; %CHAN...	-2.51	8.88	35.70	-4.53	0.64	7.07
Liaoning; %CHANGE(Ov...	3.83	7.34	39.33	-8.44	7.56	9.88
Jilin; %CHANGE(Over Ye...	-0.43	22.30	-0.29	-10.38	45.59	15.68
Heilongjiang; %CHANGE...	-18.14	47.43	-5.40	-5.59	7.35	31.79
Shanghai; %CHANGE(Ov...	-4.46	23.04	29.01	-11.54	0.65	-13.55
Jiangsu; %CHANGE(Ove...	1.84	78.74	-1.86	-0.22	-13.98	-11.22
Zhejiang; %CHANGE(Ov...	10.73	21.76	24.38	-6.40	-0.90	92.42
Anhui; %CHANGE(Over ...	17.30	37.10	7.65	9.70	8.07	47.83
Fujian; %CHANGE(Over ...	9.48	49.61	31.77	-12.75	-12.53	-2.24
Jiangxi; %CHANGE(Over...	41.99	66.38	72.76	-19.17	15.48	-0.87
Shandong; %CHANGE(O...	-14.45	52.64	23.90	-10.20	-0.48	-2.36
Henan; %CHANGE(Over ...	5.42	47.88	24.57	-3.91	7.89	-20.23

Smallest Value ▬▬▬ Largest Value

Natural Growth Rate

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Beijing	0.08	0.09	-0.01	0.07	0.11	0.13	0.34	0.34	0.35	0.31	0.40	0.47	0.44	0.48	0.30	0.41	0.38	0.27	0.26	0.18
Tianjin	0.16	0.14	0.11	0.13	0.14	0.16	0.20	0.22	0.26	0.26	0.25	0.26	0.23	0.21	0.02	0.18	0.26	0.13	0.14	0.01
Hebei	0.50	0.53	0.52	0.58	0.61	0.62	0.66	0.66	0.65	0.68	0.65	0.65	0.62	0.69	0.56	0.61	0.66	0.49	0.47	0.09
Shanxi	0.72	0.67	0.62	0.63	0.60	0.57	0.53	0.53	0.49	0.53	0.49	0.49	0.52	0.50	0.44	0.48	0.56	0.43	0.33	0.12
Inner Mongolia	0.50	0.37	0.31	0.35	0.46	0.40	0.45	0.43	0.40	0.38	0.35	0.36	0.34	0.36	0.24	0.33	0.37	0.24	0.26	-0.01
Liaoning	0.16	0.13	0.11	0.09	0.10	0.11	0.15	0.11	0.10	0.04	-0.03	-0.04	-0.00	0.03	-0.04	-0.02	-0.04	-0.10	-0.08	-0.34
Jilin	0.34	0.32	0.16	0.18	0.26	0.27	0.25	0.16	0.20	0.20	0.10	0.04	0.03	0.04	0.03	-0.01	0.03	0.04	-0.09	-0.30
Heilongjiang	0.30	0.25	0.20	0.18	0.27	0.24	0.25	0.22	0.21	0.23	0.11	0.13	0.08	0.09	-0.06	-0.05	-0.04	-0.07	-0.10	-0.45
Shanghai	-0.10	-0.05	-0.14	0.00	0.10	0.16	0.30	0.27	0.27	0.20	0.19	0.42	0.29	0.31	0.24	0.40	0.28	0.18	0.15	-0.06
Jiangsu	0.24	0.22	0.20	0.23	0.22	0.23	0.23	0.23	0.26	0.28	0.26	0.24	0.24	0.24	0.20	0.27	0.27	0.23	0.21	0.02
Zhejiang	0.38	0.38	0.33	0.49	0.50	0.49	0.48	0.46	0.46	0.47	0.41	0.46	0.46	0.50	0.50	0.57	0.64	0.54	0.50	0.06
Anhui	0.66	0.60	0.59	0.61	0.62	0.63	0.64	0.65	0.65	0.68	0.63	0.69	0.68	0.70	0.70	0.71	0.82	0.65	0.60	0.15
Fujian	0.60	0.58	0.58	0.60	0.60	0.63	0.60	0.63	0.62	0.61	0.62	0.70	0.62	0.75	0.78	0.83	0.88	0.70	0.68	0.30
Jiangxi	0.94	0.87	0.81	0.76	0.78	0.78	0.79	0.79	0.79	0.77	0.75	0.73	0.69	0.70	0.70	0.73	0.77	0.74	0.66	0.29
Shandong	0.49	0.46	0.48	0.60	0.58	0.55	0.50	0.51	0.56	0.54	0.51	0.49	0.50	0.74	0.59	1.08	1.01	0.61	0.43	0.13

Smallest Value ▬▬▬ Largest Value

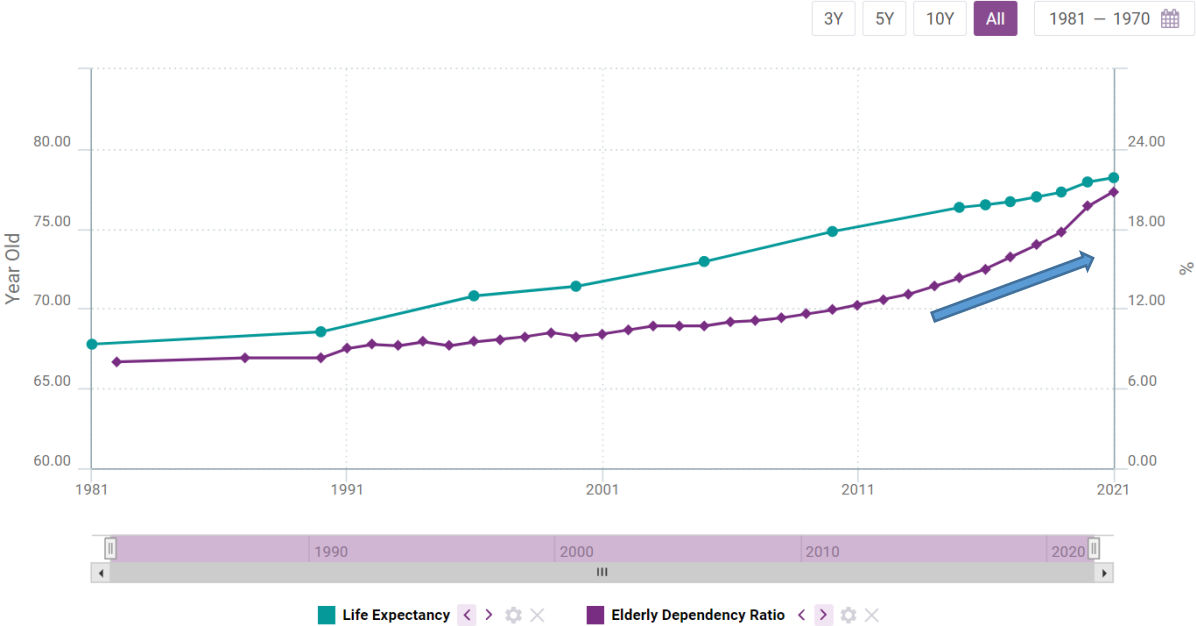2 years before three-child policy

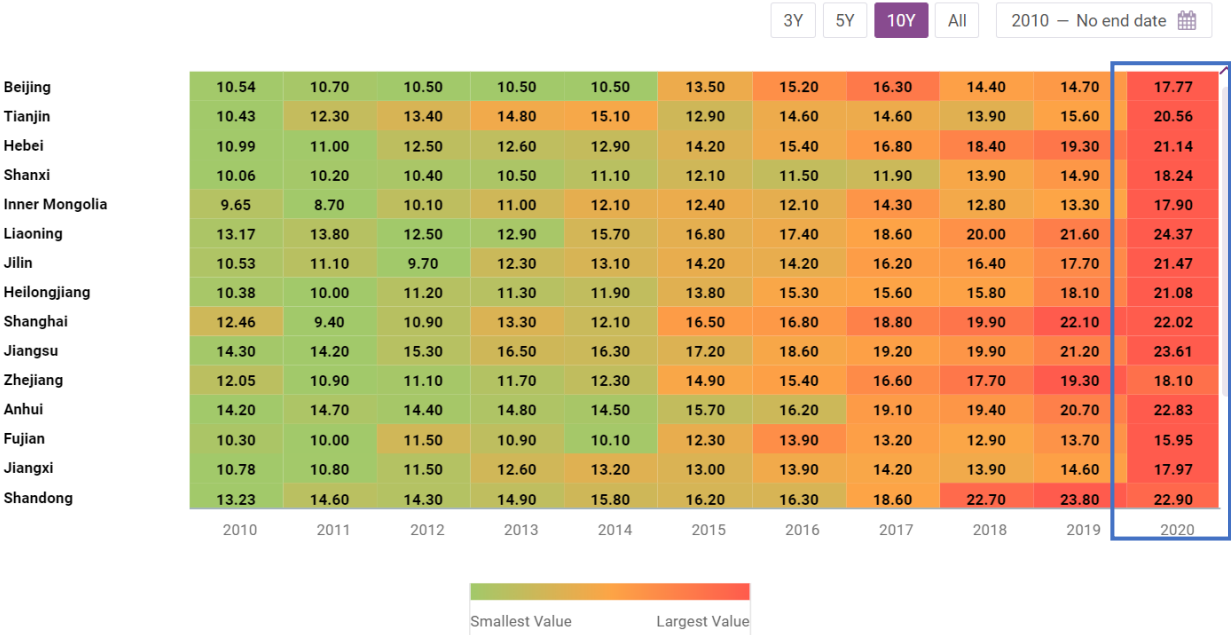## 2.2 Analysing population aging via elderly dependency ratio

Elderly Dependency Ratio refers to the ratio of the elderly population (aged 65 and above) to the working-age population (aged 15-64), and is one of the major indicators measuring population aging. Since 2010, with the improvement of people's living standards, life expectancy has improved by more than 3 years, and elderly dependency ratio has increased by 8pct from 11.9% to 20.8%.

In 2020, the elderly dependency ratio of 26 provinces (out of 31) exceeded 14%. The inevitable population aging and the demographic dividends decline under society development will have a profound impact on the economy and real estate industry.
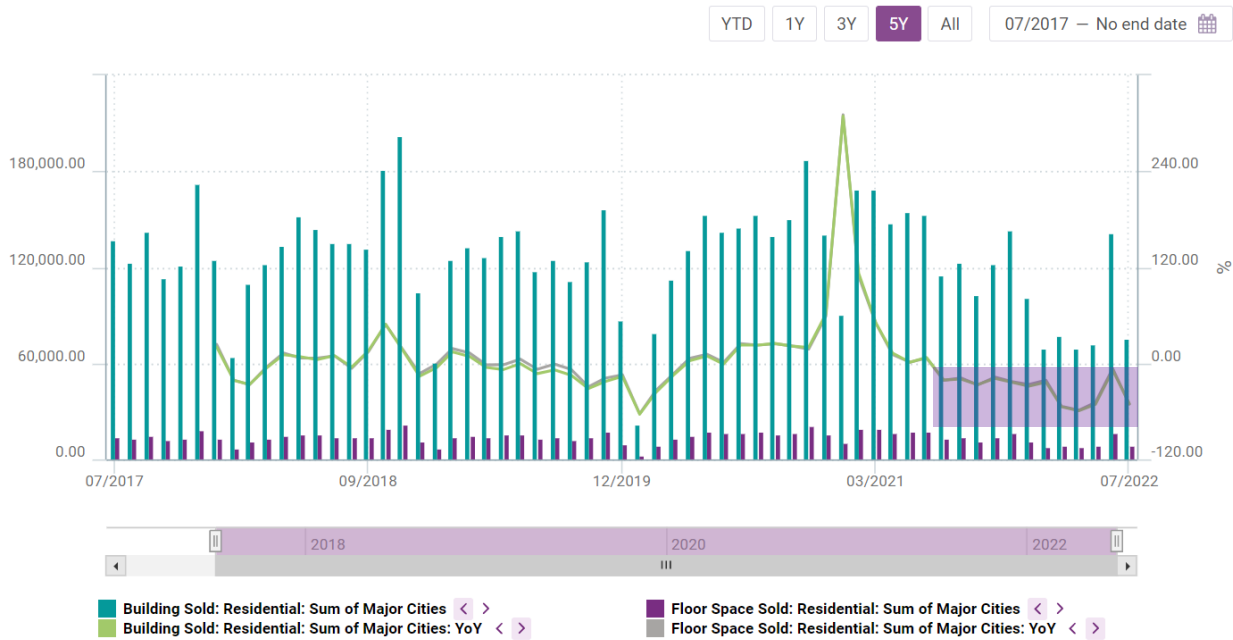
Life Expectancy & Dependency Ratio ✎

■ Life Expectancy ‹ › ⚙ ✕   ■ Elderly Dependency Ratio ‹ › ⚙ ✕
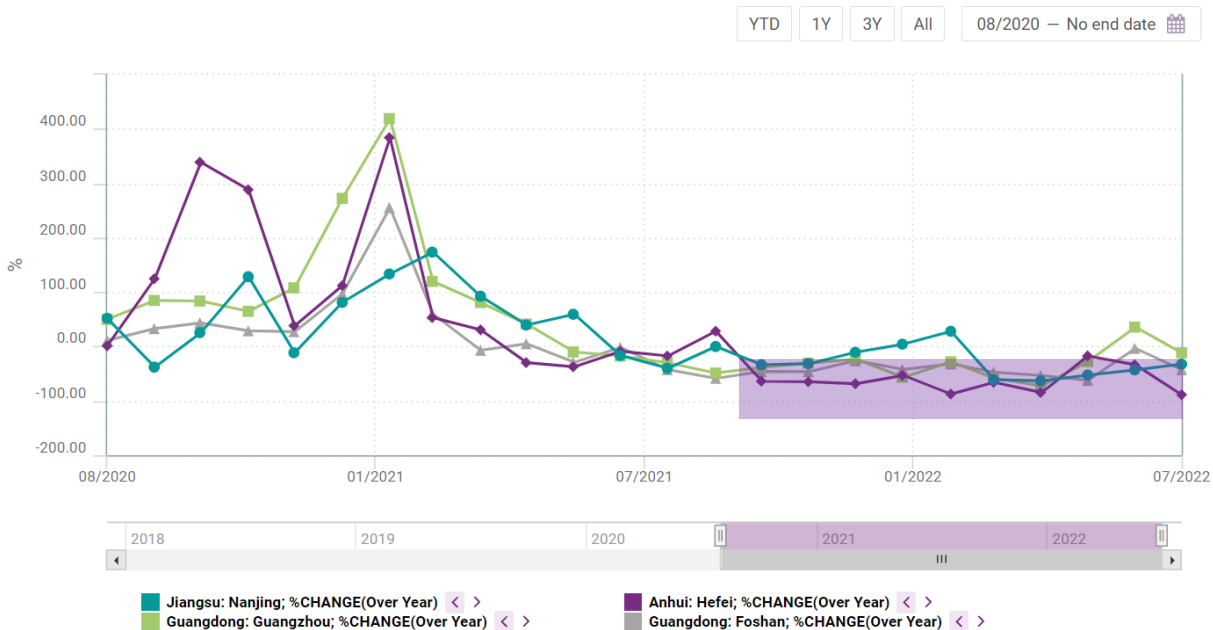
CN: Elderly Dependency Ratio(Sample Survey)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Beijing	10.54	10.70	10.50	10.50	10.50	13.50	15.20	16.30	14.40	14.70	17.77
Tianjin	10.43	12.30	13.40	14.80	15.10	12.90	14.60	14.60	13.90	15.60	20.56
Hebei	10.99	11.00	12.50	12.60	12.90	14.20	15.40	16.80	18.40	19.30	21.14
Shanxi	10.06	10.20	10.40	10.50	11.10	12.10	11.50	11.90	13.90	14.90	18.24
Inner Mongolia	9.65	8.70	10.10	11.00	12.10	12.40	12.10	14.30	12.80	13.30	17.90
Liaoning	13.17	13.80	12.50	12.90	15.70	16.80	17.40	18.60	20.00	21.60	24.37
Jilin	10.53	11.10	9.70	12.30	13.10	14.20	14.20	16.20	16.40	17.70	21.47
Heilongjiang	10.38	10.00	11.20	11.30	11.90	13.80	15.30	15.60	15.80	18.10	21.08
Shanghai	12.46	9.40	10.90	13.30	12.10	16.50	16.80	18.80	19.90	22.10	22.02
Jiangsu	14.30	14.20	15.30	16.50	16.30	17.20	18.60	19.20	19.90	21.20	23.61
Zhejiang	12.05	10.90	11.10	11.70	12.30	14.90	15.40	16.60	17.70	19.30	18.10
Anhui	14.20	14.70	14.40	14.80	14.50	15.70	16.20	19.10	19.40	20.70	22.83
Fujian	10.30	10.00	11.50	10.90	10.10	12.30	13.90	13.20	12.90	13.70	15.95
Jiangxi	10.78	10.80	11.50	12.60	13.20	13.00	13.90	14.20	13.90	14.60	17.97
Shandong	13.23	14.60	14.30	14.90	15.80	16.20	16.30	18.60	22.70	23.80	22.90

Smallest Value ▬▬▬▬▬ Largest Value

2.3 Commodity housing transaction decreased due to pandemic & population factors

The new residential demand is facing a downward trend based on long-term population regular pattern. Since 2021, residential building sold & floor space sold in major cities have experienced negative YoY growth due to the pandemic and population restructuring. Multiple cities have introduced real estate stimulation policies, for example, Nanjing, Hefei and Guangzhou changed transaction restrictions while Foshan, Zhuhai, and Dongguan adjusted transaction restricted areas.

CN: Residential Building Sold & Floor Space Sold

Legend:
- Building Sold: Residential: Sum of Major Cities
- Building Sold: Residential: Sum of Major Cities: YoY
- Floor Space Sold: Residential: Sum of Major Cities
- Floor Space Sold: Residential: Sum of Major Cities: YoY

Commodity Building: Floor Space Sold: Residential

Legend:
- Jiangsu: Nanjing; %CHANGE(Over Year)
- Guangdong: Guangzhou; %CHANGE(Over Year)
- Anhui: Hefei; %CHANGE(Over Year)
- Guangdong: Foshan; %CHANGE(Over Year)

2.4 Pandemic's impact on rental prices

The pandemic also had a negative impact on rental prices. For example in Shanghai, both the commercial building & residential rental price experienced negative YoY growth in 2020, among which the commercial building was suffering from a more significant decrease, with negative rental price YoY for nearly one whole year.

Property Rental Price: Median

Commercial Building: Shanghai; %CHANGE(Over Year) ‹ ›   Residential: 1st Class Area: Shanghai; %CHANGE(Over Year) ‹ ›
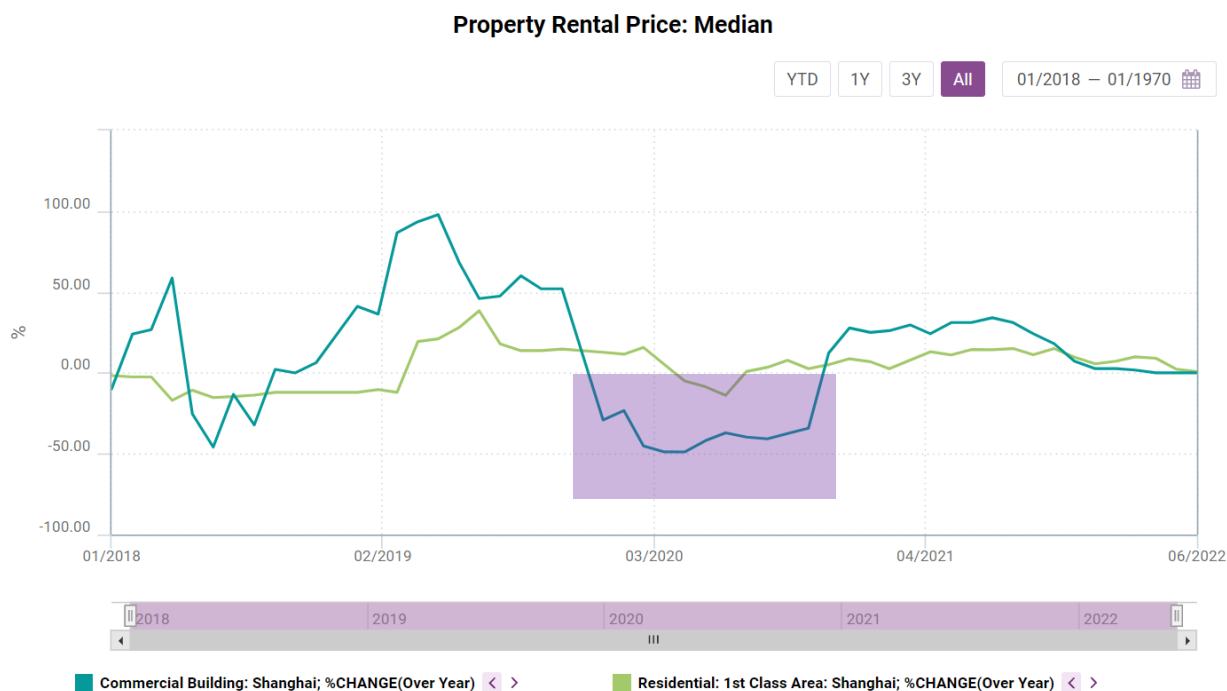
3. Data Usability

Please click THIS LINK to see this new release directly on CDMNext. Additionally, THIS LINK can be saved directly as "MY SEARCHES" under CDMNext for future recurring assess.

China Premium Database will continue with further regional data expansion not later than end of October 2022, and the data include provincial source & use of credit funds with full currency in banking industry. Meanwhile, we will release relevant CEIC Insights to enable our client engagements with this new dataset.

Please stay tuned!

4. Appendix

4.1 Regional Real Estate Data Previous Enhancements

Topic	Indicators	Series	CDMNext Links	Frequency	Geo
Land Market Statistics *Each indicator has 4 coverages: ➢ Total, ➢ Residential, ➢ Commercial & Office, ➢ Industrial & Storage	**Land Transaction:** • Area & Amount Transferred: o No. of Case o Land Area o Land Sold o Floor Space • Price & Premium Transferred: o Average Land Price o Average Floor Price o Premium Rate	73,000+	Land Transaction	• Monthly • Quarterly • Annually	330 cities and regions
	Land Supply: • Transferred: o No. of Case o Land Area o Average Land Price • Transferred Unsettled: o No. of Case o Land Area	52,000+	Land Supply		
Total		125,000+			

4.2 Regional Macro Data Previous Enhancements

4.2.1 Regional Data Released in 2022 H1

Geo Level (# entity)	Data Scope	Frequency	Access
Prefecture Level City (74)	Local Government (incl. local level): ▪ Debt Limit ▪ Bond: Issuance (incl. new, replacement, repayment, or refinancing) ▪ Debt: repayment, interest payment, outstanding	Annually	Local Government Debt: Prefecture Level City

Region & Province (37)	Local Government: ▪ Debt Limit (incl. local level) ▪ Bond: Issuance Market, Outstanding ▪ Bond (incl. local level): Issuance, repayment, interest payment ▪ Debt (incl. local level): outstanding	Annually	Local Government Debt: by region
	Local Government: ▪ Bond: Issuance, repayment, interest payment, outstanding ▪ Debt: outstanding	Quarterly	
		Monthly	
Nation (1)	▪ Local Government Debt: Issuance (by maturity), Maturity, Average Subscription Multiples, Issuance Average Interest Rate Spread	Monthly	Table CN.FA: Government Debt: Local Government: Issuance: By Maturity Table CN.FA: Government Debt: Local Government: Maturity Table CN.FA: Government Debt: Local Government: Average Subscription Multiples Table CN.FA: Government Debt: Local Government: Issuance Average Interest Rate Spread CN: Local Government Debt Outstanding: Government Bond: General CN: Local Government Debt Outstanding: Government Bond: Special Table CN.FA: Government Debt: Local Government: Issuance
	▪ Local Government Bond Outstanding: Average Rate (incl. General, Special) and breakdowns by maturity	Monthly	Table CN.MF: MOF: Local Government Bond Yield: Primary Market

4.2.2 Regional Data Released in 2020-2021

Topics	Indicators	Regional Level	Frequency	Access
Balance of Payments	FX sales/settlement by banks and on behalf of client (by account types), which helps to analyze where in China had driven the currency flow.	Province	Monthly	Foreign Exchange Settlement and Sales by Bank Foreign Exchange Settlement and Sales by Bank: By Region Foreign Related Receipt and Payment of Banks on behalf of Client Foreign Related Receipt and Payment of Banks on behalf of Client: By Region
National Accounts	GDP (by expenditure method): inclusive of 3 attributes a) Final Consumption Expenditure, b) Gross Capital Formation, & c) Net Export of Goods and Services breakdowns.	City	Annually	Gross Domestic Product: Expenditure: Prefecture Level City
	GDP (Index) with industries' breakdowns	City	Quarterly / Annually	Gross Domestic Product: Prefecture Level City
Inflation	• CPI total and by 8 expenditure categories including clothing / residence / etc. • Total RPI • PPI total and by producer & consumer goods.	City	Annually	Consumer Price Index: Prefecture Level City Retail Price Index: Prefecture Level City Producer Price Index: Prefecture Level City
Investment	Direct investment from foreign countries to local provinces and municipals in China.	Province	Annually	Foreign Direct Investment: By Country: Provincial and Municipal
	Utilized Real Estate Fixed Asset Investment values & YoY.	City	Annually	Table CN.OU: Fixed Asset Investment: Prefecture Level City: Real Estate

				Table CN.OU: Fixed Asset Investment: Prefecture Level City: YoY: Real Estate
	FAI with industries' breakdowns	City	Monthly / Annually	Fixed Asset Investment: Prefecture Level City
Socio Demographics	Population Household Registration/Usual Residence by gender, residence and key rates/changes	City	Annually	Population: Prefecture Level City
Household Survey	Disposable Income/Consumption Expenditure	City	Quarterly	Table CN.HF: Disposable Income per Capita: Prefecture Level City: Quarterly Table CN.HF: Disposable Income per Capita: Prefecture Level City: Rural: Quarterly Table CN.HF: Consumption Expenditure per Capita: Prefecture Level City: Quarterly Table CN.HF: Consumption Expenditure per Capita: Prefecture Level City: Rural: Quarterly
Consumer Goods & Services	Retail Sales of Consumer Goods	City	Monthly / Annually	Table CN.HE: Retail Sales of Consumer Goods: Prefecture Level City: Urban: Monthly Table CN.HE: Retail Sales of Consumer Goods: Prefecture Level City: Rural: Monthly Table CN.HE: Retail Sales of Consumer Goods: Prefecture Level City: Period on Period Change: Monthly Table CN.HE: Retail Sales of Consumer Goods: Prefecture Level City: Urban Table CN.HE: Retail Sales of Consumer Goods: Prefecture Level City: Rural Table CN.HE: Retail Sales of Consumer Goods: Prefecture Level City: YoY
International Trade	Trade Balance/Export/Import	City	Annually	Table CN.JH: RMB: Trade Balance: Prefecture Level City Table CN.JH: RMB: Export: Prefecture Level City Table CN.JH: RMB: Import: Prefecture Level City
Real estate	Floor Space Waiting for Sale and its residential breakdown	City	Annually	Table CN.RKG: Floor Space Waiting for Sale: Commodity Bldg: Prefecture Level City Table CN.RKG: Floor Space Waiting for Sale: Commodity Bldg: Prefecture Level City: Residential